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CARBON STEEL ALLOYS, CONTINUED ON THE NEXT PAGE

1 = CRM, 2 = RM, 3 = RM with no uncertainties

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Ti	V	W
1005		1	DSZU C040A	0.013	0.012	0.0023	0.0029	0.060	0.007	0.005	0.007	(0.002)	(0.001)	0.0068	0.0010	(0.001)	(0.002)
1005		1	ECRM 064-2D	0.0026	0.1641	.	.	0.0065	0.0077	0.0115	.	0.0027	0.00077	0.0026	.	0.00015	.
1005		1	SS 111/1	0.0070	0.1623	0.0045	0.0049	0.0039	0.0089	0.0161	0.0055	0.0053	0.0005	0.0025	0.0004	0.0002	.
1006		1	IRSID 1670	0.0011	0.3981	0.0128	0.0075	0.0046	0.0134	0.0142	0.0174	0.0018	0.0009	0.0016	0.0078	(0.0005)	.
1008	17034	1	BS XCAS	0.024	0.471	0.008	0.0064	0.339	0.020	0.031	0.035	0.0086	0.0069	0.0055	0.0010	0.020	(0.006)
1008		1	ECRM 057-2D	0.0507	0.246	0.0120	0.0127	.	0.0146	0.0096	0.0114	.	.	0.0023	.	.	.
1009	17034	1	BS 1009	0.008	0.212	0.0118	0.0086	0.048	0.011	0.0129	0.028	0.0020	(0.003)	0.0043	0.0007	(0.0006)	(0.001)
1009	17034	1	BS XCCS-2	0.021	0.58	0.0055	0.0059	0.40	0.047	0.099	0.039	0.016	0.013	0.0139	0.011	0.018	0.020
1010		1	IMZ 111	0.106	0.31	0.010	0.039	0.55	0.036	0.23	0.072	.	0.084	0.0133	.	0.022	.
1010		1	IMZ 71A	0.126	0.493	0.0126	0.0075	0.494	0.90	0.036	0.505	0.025	0.018	0.0065	0.0041	0.055	0.023
1011		1	IMZ 73	0.097	0.68	0.019	0.013	0.12	0.17	0.13	0.079	.	0.013	.	(0.002)	0.022	.
1016	17034	1	BS 1016	0.172	0.77	0.011	0.030	0.193	0.153	0.107	0.091	0.0193	0.040	0.0113	0.0010	0.0011	(0.0013)
1016 * Provisional		1	BS 1016A *	0.17	0.73	0.012	0.012	0.21	0.054	0.041	0.11	0.005	0.037	0.006	0.001	0.003	0.001
1016 * Provisional		1	BS 1016B *	0.17	0.73	0.012	0.014	0.22	0.053	0.040	0.11	0.005	0.037	0.006	0.001	0.003	0.001
1017		1	IMZ 112B	0.195	0.43	0.022	0.016	0.27	0.055	0.046	0.034	.	0.043	0.0100	0.010	0.045	.
1017		1	IRSID 1664	0.2008	0.472	0.0106	0.0259	0.0616	0.0820	0.0547	0.0707	(0.0084)	0.0157	0.0072	0.0013	(0.0005)	<0.002
1018		1	12X 10180C	0.171	0.803	0.0150	0.0200	0.147	0.0500	0.0284	0.0793	.	0.0047	0.0052	.	.	.
1018		1	12X 10180D	0.179	0.807	0.014	0.025	0.286	0.066	0.053	0.0251	0.007	0.0026	0.007	.	.	.
1018		1	ECRM 087-1D	0.174	0.671	0.010	0.046	0.263	0.171	0.118	0.078	0.015	0.021	.	.	.	.
1018		1	IARM 28K	0.174	0.80	0.012	0.027	0.291	0.171	0.0638	0.107	0.0060	0.0210	(0.008)	(0.0015)	(0.0014)	.
1018	17034	1	BS 1018	0.195	0.79	0.012	0.024	0.237	0.130	0.104	0.177	0.0058	0.044	0.0079	0.0009	0.0009	0.0014
1018	17034	1	BS 1018A	0.192	0.73	0.0078	0.020	0.197	0.134	0.092	0.094	0.0062	0.035	0.0061	0.0006	0.0019	(0.0004)
1020		1	IARM Fe1020-18	0.226	0.547	0.006	0.024	0.235	0.198	0.078	0.125	0.0065	0.0252	0.0098	.	0.036	.
1020	17025, 34	1	BS 1020	0.210	0.568	0.0058	0.0249	0.250	0.184	0.059	0.109	0.0070	0.018	0.0109	(0.0005)	0.0363	(0.0004)
1020 * Provisional		1	BS 1020A *	0.22	0.58	0.014	0.023	0.23	0.16	0.060	0.12	0.006	0.018	0.010	0.002	0.035	0.005
1020 * Provisional		1	BS 1020B *	0.22	0.59	0.014	0.023	0.23	0.16	0.060	0.12	0.006	0.018	0.010	0.002	0.035	0.005
1020		2	BS 57F	0.196	0.554	0.009	0.027	0.202	0.197	0.070	0.120	0.007	0.018	0.0077	.	0.063	.
1023		1	IMZ 112A	0.212	0.471	0.0055	0.0188	0.257	0.068	0.055	0.099	0.080	0.054	0.0058	0.0138	0.043	0.072
1026	17034	1	BS 1026A	0.270	0.76	0.0064	0.021	0.180	0.094	0.081	0.123	(0.005)	0.053	0.0100	(0.0006)	0.0257	0.0009
1026		1	IARM 359A	0.267	0.686	0.0094	0.020	0.233	0.186	0.068	0.121	0.0069	0.023	0.0094	0.0009	0.027	(0.001)
1030	17034	1	BS 1030A	0.34	0.763	0.0059	0.016	0.28	0.189	0.141	0.112	0.0061	0.029	0.0082	0.0014	0.0261	(0.0011)
1030		1	IARM 209D	0.322	0.68	0.0084	0.021	0.268	0.243	0.079	0.137	0.007	0.037	0.0107	0.0011	0.042	(0.002)
1030	17025, 34	1	BS 1030	0.331	0.682	0.0101	0.0299	0.261	0.269	0.078	0.124	0.0069	0.0182	0.0107	0.0005	0.031	0.0012
1033		1	IRSID 1663	0.353	0.967	0.0090	0.034	0.235	0.180	0.148	0.206	.	0.042	.	0.051	.	.
1035	17034	1	BS 1035	0.362	0.758	0.0100	0.028	0.246	0.241	0.123	0.151	0.0073	0.049	0.0105	0.0007	0.026	0.0020

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Ti	V	W
1035	LAST	2	BS 4931	0.352	0.80	0.011	0.016	0.27	0.217	0.070	0.093	0.006	0.024	0.0080	.	0.058	.
1035		1	IARM 360A	0.331	0.733	0.008	0.023	0.260	0.235	0.078	0.113	0.0067	0.024	0.0102	0.0010	0.039	(0.001)
1039		1	IRSID 1637	0.401	0.940	0.030	0.030	0.378	0.097	0.068	(0.033)	.	(0.006)	.	.	(0.002)	.
1040	17034	1	BS 1040	0.402	0.79	0.010	0.032	0.229	0.241	0.067	0.123	0.0069	0.021	0.0111	0.0009	0.030	(0.0017)
1040		1	IARM 210D	0.412	0.73	0.0052	0.030	0.230	0.273	0.122	0.096	0.007	0.034	0.011	0.0104	0.024	(0.002)
1040		1	IRSID 1657	0.445	0.724	0.028	(0.013)	0.274	.	0.048	(0.022)	.	(0.008)	.	.	(0.001)	.
1042		1	IRSID 1656	0.477	0.730	0.027	0.013	0.277	.	(0.048)	(0.017)	.	(0.007)	.	.	(0.002)	.
1042		1	NM EN-8	0.42	0.82	0.02	0.02	0.21	.	.	.	.	.	.	.	.	.
1043		1	IRSID 1652	0.406	0.931	(0.017)	0.040	0.386	0.345	0.190	0.184	.	(0.042)	.	.	.	.
1045	17034	1	BS 1045	0.458	0.796	0.0069	0.023	0.215	0.190	0.060	0.108	0.0056	0.0170	0.0113	0.0011	(0.002)	(0.0007)
1045		2	BS 56E	0.483	0.72	0.010	0.025	0.24	0.015	0.015	0.021	0.005	0.005	0.0056	(0.001)	(<0.002)	.
1045		1	IARM 200D	0.453	0.749	0.0103	0.024	0.225	0.232	0.097	0.109	0.007	0.0217	(0.009)	(0.0013)	0.0244	(0.003)
1045		1	IPT 503	0.456	0.682	0.027	0.027	0.218	0.129	0.063	0.160	0.006	0.020	0.0082	0.0011	.	.
1050		1	IARM Fe1050-18	0.499	0.79	0.0045	0.027	0.223	0.179	0.068	0.100	0.0056	0.018	0.0097	0.0008	0.0270	.
1060		1	IARM 373A	0.63	0.70	0.0123	0.031	0.22	0.107	0.048	0.096	0.005	0.0176	0.0088	0.0017	0.023	(0.002)
1069		1	ECRM 059-2D	0.721	0.495	0.0046	0.0084	0.188	0.0074	0.0198	0.0090	.	0.0018	0.0051	.	.	.
1078		1	ECRM 056-2D	0.8181	0.5073	0.0103	0.0093	0.2006	0.0129	0.0218	0.0146	.	.	.	.	.	.
1078		1	SRM 1224	0.75	0.41	0.009	0.039	0.173	0.072	0.054	0.071	.	0.013	.	.	0.002	.
1080	17034	1	BS 54J	0.78	0.77	0.0090	0.0108	0.552	0.080	0.037	0.177	0.0042	0.0138	0.0060	0.0020	0.0014	0.0024
1090		1	SS 602/2	0.94	0.66	0.023	0.031	0.057	(0.06)	(0.02)	(0.03)	(0.007)	(0.004)	.	.	(0.001)	.
1095		1	SRM 1227	0.97	0.402	0.014	0.026	0.215	0.006	0.007	0.019	0.003	0.003	.	.	0.002	.
1215		1	IARM Fe1215-18	0.043	0.96	0.059	0.29	(0.006)	0.164	0.055	0.051	0.0055	0.016	0.0109	0.0007	0.0020	.
1541		1	IARM 349A	0.41	1.49	0.011	0.025	0.192	0.300	0.178	0.189	0.0085	0.059	0.0100	0.0013	0.027	0.004
1541		1	IRSID 1648	0.432	1.41	0.031	(0.070)	0.242	0.408	0.165	0.170	.	(0.028)	.	.	.	.
1544		1	IRSID 1644	0.394	0.594	0.021	0.031	0.287	0.265	0.158	0.138	.	.	.	.	.	.
A-106B		1	SRM 1228	0.072	0.365	0.004	0.018	0.007	0.012	0.018	0.016	.	0.009	.	.	<0.001	.
A-36	17034	1	BS 1016	0.172	0.77	0.011	0.030	0.193	0.153	0.107	0.091	0.0193	0.040	0.0113	0.0010	0.0011	(0.0013)
A-36	17034	1	BS 1018	0.195	0.79	0.012	0.024	0.237	0.130	0.104	0.177	0.0058	0.044	0.0079	0.0009	0.0009	0.0014
A-36	17025, 34	1	BS 1020	0.210	0.568	0.0058	0.0249	0.250	0.184	0.059	0.109	0.0070	0.018	0.0109	(0.0005)	0.0363	(0.0004)
A-36		1	IARM 213C	0.201	0.922	0.007	0.025	0.25	0.149	0.068	0.099	0.0074	0.022	0.0116	0.0010	0.035	(0.002)
A-36		1	IARM 213D	0.158	0.725	0.0120	0.031	0.226	0.207	0.076	0.093	0.009	0.0131	(0.008)	0.0011	0.0010	(0.003)
LF-2		2	BS 2971	0.187	1.01	0.015	0.024	0.237	0.065	0.111	0.152	.	0.040	0.0084	.	(0.002)	.
LF-2		2	BS 57F	0.196	0.554	0.009	0.027	0.202	0.197	0.070	0.120	0.007	0.018	0.0077	.	0.063	.
LF-2	17025, 17034	1	BS LF2C	0.21	1.02	0.012	0.0182	0.263	0.153	0.099	0.152	0.0100	0.029	0.0096	0.0019	0.0014	0.0023
XC45		1	SS 459/2	0.467	0.909	0.0482	0.0481	0.640	.	.	.	0.0890	.	.	.	0.0585	.

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Ti	V	W

CARBON STEEL ALLOYS, CONTINUED FROM THE PREVIOUS PAGE

Number	Al	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Zr	Units
DSZU C040A	0.039	(0.0002)	0.00032	0.0021	.	.	(0.0003)	.	.	.	(0.0002)	.	Disc 40 mm Ø x 25 mm
ECRM 064-2D	.	0.0036	.	.	.	.	0.0146	.	0.00018	.	0.00051	.	Disc 38 mm Ø x 25 or 30 mm
SS 111/1	.	0.0011	.	.	.	.	.	.	.	.	0.0006	.	Disc 44 mm Ø x 19 mm
IRSID 1670	0.0479	0.0018	0.0007	(0.0002)	.	.	(0.0003)	.	.	.	0.0017	.	Disc 37 mm Ø x 30 mm
BS XCAS	(0.027)	0.0016	(0.0002)	<0.005	99.0	(0.0002)	(0.0015)	0.008	(0.0007)	0.0006	0.0017	(0.0009)	Disc 38 mm Ø x 30 mm
ECRM 057-2D	0.059	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm
BS 1009	0.026	0.0011	(0.0002)	0.0033	99.6	(0.0003)	(0.0008)	0.0060	(0.0004)	(0.0009)	0.0007	(0.0006)	Disc 38 mm Ø x ~7 or 19+ mm
BS XCCS-2	0.073	(0.004)	0.021	0.0032	98.6	0.0003	(0.003)	0.0066	(0.0004)	(0.0016)	(0.0015)	(0.0015)	Disc ~37 mm D x ~30 mm
IMZ 111	0.017	.	.	0.0003	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm Als: 0.007
IMZ 71A	0.019	0.016	0.0009	.	.	.	0.0100	.	.	0.013	0.015	0.0065	Disc 35 mm Ø x 20 mm
IMZ 73	0.010	.	.	.	.	.	(0.01)	.	.	.	.	(0.0025)	Disc 40 mm Ø x 40 mm
BS 1016	0.0200	0.0066	(0.0003)	(0.0004)	98.4	(0.0007)	(0.0009)	(0.003)	(0.004)	.	0.013	(0.001)	Hexagon ~60 mm Ø x 19+ mm
BS 1016A *	0.020	0.003	<0.005	0.0008	[98.6]	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	0.0006	Disc 38 mm Ø x ~7 or 19+ mm
BS 1016B *	0.021	<0.005	0.0002	0.0008	[98.6]	<0.005	<0.005	<0.005	<0.005	<0.005	0.004	0.0008	Disc 38 mm Ø x ~7 or 19+ mm
IMZ 112B	(0.03)	.	.	.	.	.	0.013	.	.	.	0.15	.	Disc 40 mm Ø x 40 mm
IRSID 1664	.	0.0115	(0.0002)	(0.0005)	.	(0.00008)	(0.0002)	.	0.0002	0.0012	0.0108	(0.0001)	Disc 37 mm Ø x 30 mm Als: 0.0193
12X 10180C	0.0198	0.0029	.	.	.	.	.	.	.	.	0.0024	.	Disc ~40 mm Ø x ~15 mm Zn: 0.0005
12X 10180D	(0.003)	0.0068	.	.	.	.	.	.	.	.	0.0033	.	Disc ~40 mm Ø x ~15 mm
ECRM 087-1D	.	0.024	.	.	.	.	.	.	.	0.0046	0.017	.	Disc 38 mm Ø x 25 or 30 mm
IARM 28K	(0.0025)	(0.005)	0.0005	.	.	.	0.0017	(0.005)	.	.	0.0075	.	Disc 31 mm Ø x 2 mm
BS 1018	0.029	0.0041	(0.0002)	(0.0004)	98.2	(0.0003)	(0.0006)	0.0014	(0.0006)	(0.001)	0.0099	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm
BS 1018A	0.0199	0.0040	0.0003	0.0008	98.5	0.0002	0.0012	(0.0015)	0.0005	0.0012	0.0075	0.0011	Disc 38 mm Ø x ~7 or 19+ mm
IARM Fe1020-18	(0.003)	0.0044	.	(0.002)	98.5	.	(0.0012)	(0.007)	.	0.0018	0.0080	.	Disc 31 mm Ø x 2 or 18 mm
BS 1020	0.0006	0.0074	(0.0001)	0.0022	[98.5]	(0.0001)	(0.0003)	0.0046	(0.0002)	(0.0018)	0.0090	(0.0005)	Disc 44 mm Ø x ~7 or 19+ mm
BS 1020A *	0.002	<0.05	0.0002	0.001	[98.5]	<0.005	<0.005	<0.05	<0.005	<0.005	0.017	<0.005	Disc 38 mm Ø x ~7 or 19+ mm
BS 1020B *	0.002	<0.05	0.0002	0.001	[98.5]	<0.005	<0.005	<0.05	<0.005	<0.005	0.017	<0.005	Disc 38 mm Ø x ~7 or 19+ mm
BS 57F	(0.002)	(0.006)	.	(0.0003)	.	.	.	(0.006)	.	.	0.008	.	Disc 44 mm Ø X ~7 mm LAST
IMZ 112A	0.017	0.023	0.0010	.	.	.	0.0123	.	0.008	0.021	0.162	.	Disc 38 mm Ø x 20 mm Zn: 0.0020
BS 1026A	0.0091	(0.005)	(0.0003)	0.0025	98.3	<0.001	0.0008	0.0042	<0.005	0.0013	0.0068	0.0011	Disc 38 mm Ø x ~7 or 19+ mm
IARM 359A	0.002	0.0073	0.0003	0.0013	.	.	0.002	0.0044	(0.001)	(0.002)	0.0100	(0.001)	Disc 31 mm Ø x 2 or 18 mm
BS 1030A	0.0021	(0.005)	(0.0003)	(0.002)	98.0	(0.0003)	(0.0007)	0.0047	0.0002	0.0014	(0.015)	(0.0003)	Disc 38 mm Ø x ~7 or 19+ mm Zn: 0.0033
IARM 209D	(0.003)	0.0060	0.0002	0.002	.	.	0.0014	0.005	0.001	0.004	0.012	.	Disc 31 mm Ø x 2 or 18 mm
BS 1030	0.0014	0.0055	0.0003	0.0012	(98.1)	(0.0002)	(0.0004)	0.005	0.0005	0.0024	0.0114	(0.0002)	Disc 38 mm Ø x ~7 mm LAST
IRSID 1663	0.037	0.028	.	.	.	.	.	.	.	.	0.0143	.	Disc 44 mm Ø x 30 mm
BS 1035	0.0008	0.0051	(0.0002)	0.0017	97.9	(0.0003)	(0.001)	0.0036	(0.001)	(0.002)	0.0027	(0.0009)	Disc 40 mm Ø x ~7 or 19+ mm

Number	Al	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Zr	Units
BS 4931	(0.001)	0.005	.	.	.	.	.	0.0034	.	.	0.009	.	Disc 37 mm Ø x ~7 mm
IARM 360A	0.0016	0.0060	0.0004	0.0017	.	.	0.0015	0.004	(0.001)	0.0023	0.010	(0.001)	Disc 31 mm Ø x 2 or 18 mm
IRSID 1637	0.022	0.042	.	.	.	.	.	.	.	.	.	.	Disc 45 mm Ø x 30 mm
BS 1040	(0.0019)	(0.006)	0.0003	0.0011	98.0	<0.05	(0.0012)	0.0023	(0.0005)	0.0022	0.009	0.0018	Disc 28 mm Ø x ~7 or 19+ mm H: 0.0002
IARM 210D	(0.002)	0.0059	0.0004	0.0009	.	.	0.001	0.0034	0.001	0.002	0.010	(0.001)	Disc 31 mm Ø x 2 or 18 mm
IRSID 1657	0.004	0.0051	.	.	.	.	.	.	.	.	.	.	Disc 42 mm Ø x 30 mm
IRSID 1656	(0.002)	0.055	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 35 mm
NM EN-8	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm last
IRSID 1652	.	0.038	.	.	.	.	.	.	.	.	0.030	.	Disc 45 mm Ø x 30 mm
BS 1045	(0.001)	0.0050	(0.0003)	0.0013	98.1	(0.0002)	0.026	0.0040	(0.0005)	0.0017	0.0084	(0.0009)	Disc 38 mm Ø x ~7 or 19+ mm
BS 56E	0.062	0.0035	.	(<0.0005)	.	.	(<0.002)	.	(0.0001)	0.0004	(0.0006)	.	Disc 44 mm Ø X ~13 to ~18 mm last
IARM 200D	(0.004)	0.0050	.	.	.	.	0.0010	.	.	.	0.0079	.	Disc 31 mm Ø X 2 or 18 mm
IPT 503	0.018	.	.	.	.	.	.	.	0.008	.	.	.	Disc 35 mm Ø x 20 mm
IARM Fe1050-18	(0.003)	(0.0030)	(0.0005)	.	98.0	.	(0.0013)	0.0026	.	0.0015	0.0103	.	Disc 31 mm Ø x 2 or 18 mm
IARM 373A	0.002	0.0046	0.0003	0.0005	.	.	0.001	0.002	(0.001)	(0.002)	0.0069	(0.003)	Disc 31 mm Ø x 2 mm
ECRM 059-2D	0.00045	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm Als: 0.00020
ECRM 056-2D	.	.	.	.	.	.	.	.	.	.	.	.	Disc 44 mm Ø x 25 or 30 mm Als: 0.00024
SRM 1224	0.060	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
BS 54J	0.0021	0.0025	<0.0005	<0.01	97.6	(0.0002)	(0.002)	(0.0011)	.	(0.0006)	(0.005)	(0.0021)	Disc 38 mm Ø x ~7 or 19+ mm
SS 602/2	0.096	.	.	.	.	.	.	.	.	.	.	(<0.005)	Disc 44 mm Ø X 19 mm
SRM 1227	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
IARM Fe1215-18	.	0.0043	.	.	.	.	0.0012	.	.	0.0018	0.0083	.	Disc ~38 mm Ø x ~3 or ~19 mm
IARM 349A	0.0020	0.005	0.0003	0.0015	.	(0.0004)	0.0012	0.003	(0.001)	(0.003)	0.015	(0.002)	Disc 31 mm Ø x 2 or 18 mm
IRSID 1648	(0.004)	(0.038)	.	.	.	.	.	.	.	.	0.033	.	Disc 40 mm Ø x 28 mm
IRSID 1644	(0.017)	.	.	.	.	.	.	.	.	.	.	.	Disc 45 mm Ø x 30 mm
SRM 1228	0.061	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
BS 1016	0.0200	0.0066	(0.0003)	(0.0004)	98.4	(0.0007)	(0.0009)	(0.003)	(0.004)	.	0.013	(0.001)	Hexagon ~60 mm Ø x 19+ mm
BS 1018	0.029	0.0041	(0.0002)	(0.0004)	98.2	(0.0003)	(0.0006)	0.0014	(0.0006)	(0.001)	0.0099	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm
BS 1020	0.0006	0.0074	(0.0001)	0.0022	[98.5]	(0.0001)	(0.0003)	0.0046	(0.0002)	(0.0018)	0.0090	(0.0005)	Disc 44 mm Ø x ~7 or 19+ mm
IARM 213C	0.0019	0.0058	0.0003	0.0014	.	.	0.0011	0.0042	0.0011	0.002	0.0081	(0.0004)	Disc 38 mm Ø x 2 mm
IARM 213D	(0.003)	(0.006)	(0.0004)	.	.	.	(0.0012)	(0.01)	.	(0.0032)	0.0147	(0.0015)	Disc 31 mm Ø x 2 or 18 mm
BS 2971	0.022	0.003	.	.	.	.	.	.	.	.	(0.005)	.	Disc 44 mm Ø X ~13 mm last
BS 57F	(0.002)	(0.006)	.	(0.0003)	.	.	.	(0.006)	.	.	0.008	.	Disc 44 mm Ø X ~7 mm LAST
BS LF2C	0.029	0.0042	0.0002	0.0002	98.0	(0.0003)	0.0009	0.0018	0.0004	<0.05	0.011	0.0008	Disc 44 mm Ø x ~7 or 19 mm
SS 459/2	0.015	.	0.0110	.	.	.	0.0102	.	0.0044	0.0121	.	(0.074)	Disc 38 mm Ø x 19 mm

Number	Al	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Zr	Units

LEADED STEEL ALLOYS

Alloy	ISO	#	Number	Pb	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N
11L17	17025, 34	2	BS 75F	0.202	0.165	1.05	0.009	0.116	0.004	0.030	0.044	0.080	0.002	.	0.018	.
11L17	17025, 34	1	BS 75G	0.247	0.161	1.08	0.0085	0.114	0.011	0.0300	0.045	0.079	0.0016	0.0031	0.0174	0.0030
12L14		2	BS 74B	0.34	0.08	0.91	0.087	0.316	0.002	0.006	0.012	0.019	(0.002)	.	0.008	.
12L14	17025, 34	1	BS 74C	0.328	0.077	0.94	0.082	0.294	(0.002)	0.005	0.011	0.019	(<0.002)	.	0.008	0.0040
12L14	17034	1	BS 74D	0.282	0.072	1.00	0.073	0.28	(0.007)	0.0057	0.0115	0.0185	(0.008)	0.0043	0.0063	0.0040
41L40	17025, 34	2	BS 70B	0.135	0.40	0.90	0.009	0.022	0.27	0.13	0.25	1.00	0.024	.	0.205	.
41L40 MOD	17034	1	BS 70C	0.133	0.387	0.90	(0.009)	0.020	0.27	0.123	0.247	0.99	0.019	0.0086	0.202	0.0079
41L50	17025, 34	2	BS 72B	0.174	0.497	0.87	0.029	0.029	0.26	0.21	0.169	0.985	0.020	0.012	0.187	0.0081
86L20	25, LAST	2	BS 73B	0.139	0.200	0.83	0.009	0.030	0.250	0.141	0.416	0.512	0.022	0.008	0.170	0.0113
86L20	17034	1	BS 73C	0.21	0.206	0.86	0.0111	0.031	0.280	0.025	0.56	0.574	0.028	0.0028	0.180	0.0040
86L20	17025, 17034	1	BS 73D	0.18	0.202	0.834	0.018	0.027	0.287	0.240	0.420	0.47	0.015	0.0123	0.162	0.0101
86L20		1	IARM Fe86L20-18	0.20	0.175	0.794	0.009	0.015	0.29	0.242	0.458	0.53	0.025	0.0085	0.203	0.0052

Number	As	B	Ca	Fe	Mg	Nb	O	Sb	Sn	Ti	V	W	Zr	Units
BS 75F	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x ~7 or 19+ mm
BS 75G	0.0028	(0.0002)	(0.0002)	[98.2]	.	(0.0003)	0.0155	.	0.0014	(0.0004)	0.0005	0.0004	.	Disc 41 mm Ø x ~7 or 19+ mm
BS 74B	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm
BS 74C	0.004	.	.	.	(<0.005)	.	.	(<0.002)	.	0.0016	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm
BS 74D	0.0047	0.0009	<0.001	98.2	(0.0003)	(0.0018)	(0.028)	<0.05	(0.0010)	(0.0007)	0.0012	<0.005	(0.0009)	Disc 41 mm Ø x ~7 or 19+ mm
BS 70B	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm
BS 70C	0.007	(0.0003)	.	96.7	<0.005	<0.005	0.0020	(0.003)	0.008	0.0020	0.0026	(0.0006)	<0.005	Disc 41 mm Ø x ~7 or 19+ mm
BS 72B	(0.006)	.	.	.	.	(0.001)	.	.	0.014	(0.002)	0.004	.	.	Disc 37 mm Ø x ~7 or 19+ mm
BS 73B	0.004	.	.	.	.	.	.	.	0.008	.	(<0.002)	.	.	Disc 41 mm Ø x ~12 or ~17 mm
BS 73C	0.0035	(0.0002)	(0.0005)	[97.0]	(0.0001)	(0.002)	0.0013	(0.002)	(0.002)	0.0024	0.0031	(0.006)	(0.0011)	Disc 38 mm Ø x ~7 or 19+ mm
BS 73D	0.0052	(0.0004)	0.0004	97.1	<0.005	(0.0014)	0.0022	(0.0021)	0.021	0.0012	0.0028	0.0107	<0.05	Disc 38 mm Ø x ~7 or 19+ mm
IARM Fe86L20-18	.	.	.	.	.	.	.	.	0.014	.	0.0016	.	.	Disc 38 mm Ø x ~2 or 19 mm

RESULFURIZED STEEL ALLOYS

Alloy	ISO	#	Number	S	C	Mn	P	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
1117	25	1	BS 3993	0.094	0.152	1.16	0.012	0.260	0.111	0.045	0.072	0.002	0.006	0.010	0.0071	(0.0008)	0.002	.
1117		2	BS 65C	0.115	0.150	1.19	0.007	0.24	0.24	0.063	0.066	(0.002)	(0.007)	0.012	0.0084	.	0.002	.
1117		1	IARM 29E	0.121	0.193	1.19	0.0157	0.239	0.253	0.082	0.105	0.0032	0.008	0.0269	0.0093	0.0014	0.0255	.
1118		1	IARM 307A	0.096	0.163	1.44	0.0113	0.281	0.190	0.197	0.104	0.032	(0.010)	0.045	0.0108	0.0015	(0.0028)	(0.005)
1118		1	IARM 307B	0.094	0.162	1.45	(0.012)	(0.30)	0.191	0.195	0.105	0.034	0.0101	0.045	(0.011)	(0.003)	(0.003)	.
1141		2	BS 66B	0.112	0.418	1.56	0.018	0.017	0.028	0.032	0.093	(0.001)	0.005	0.019	0.0056	(0.001)	0.0014	.
1141	* Provisional	1	BS 1141 *	0.11	0.40	1.50	0.014	0.24	0.12	0.051	0.099	0.004	0.007	0.018	<0.05	0.002	0.002	0.002
1141		1	IARM 348A	0.102	0.384	1.46	0.0121	0.270	0.230	0.081	0.123	(0.002)	(0.010)	0.026	(0.010)	0.0015	0.0029	(0.009)
1144	17025, 34	1	BS 1144A	0.271	0.468	1.43	0.0108	0.214	0.147	0.063	0.076	0.0020	0.0064	0.0154	0.0095	(0.0008)	0.0015	(0.0009)
1144		1	IARM 199C	0.281	0.469	1.55	0.0155	0.21	0.193	0.085	0.190	0.0019	0.007	0.0293	0.0070	0.0016	(0.0037)	0.0023
1144		1	IARM Fe1144-22	0.323	0.406	1.34	0.0091	0.171	0.115	0.036	0.061	.	0.0061	0.0112	0.0081	0.0007	0.0023	0.0017
1215		2	BS 66K	0.322	0.051	0.86	0.062	(0.004)	0.013	0.012	0.006	0.002	0.005	0.003	(0.0074)	<0.002	0.001	.
1215	17025, 34	1	BS 66L	0.315	0.065	0.844	0.061	0.002	0.007	0.015	0.026	0.0008	0.0035	0.0012	0.0031	(<0.0010)	0.0006	(<0.0010)
1429		1	ECRM 058-2D	0.1712	0.424	1.186	0.0098	0.1080	0.261	0.199	0.1211	.	.	0.0589	0.0107	.	.	.
4150 S	17034, last	1	BS 42	0.074	0.518	1.22	0.020	0.234	0.251	0.188	0.663	0.020	(0.011)	0.191	0.008	0.0017	0.0031	<0.005
A706-80		1	IARM 381A	0.043	0.272	1.16	0.013	0.269	0.379	0.185	0.129	0.0023	0.011	0.0341	(0.014)	(0.002)	0.0299	(0.003)

Number	As	B	Bi	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zn	Zr	Units
BS 3993	0.004	.	.	(0.0002)	.	.	.	(0.0030)	.	.	.	0.006	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 65C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 37 mm Ø x ~7 or 19+ mm
IARM 29E	0.0085	0.0007	.	0.0012	.	(0.0003)	0.0024	(0.005)	(0.001)	(0.003)	(0.0006)	0.0109	(0.0004)	(0.004)	.	Disc 31 mm Ø x 2 or 18 mm
IARM 307A	0.008	<0.005	<0.02	<0.0005	.	<0.006	(0.002)	(0.003)	(0.002)	<0.004	<0.006	0.0090	.	<0.002	(0.002)	Disc 31 mm Ø X 2 or 18 mm
IARM 307B	.	.	.	.	.	.	(0.0013)	.	.	.	.	0.010	.	.	.	Disc 31 mm Ø X 2 or 18 mm
BS 66B	.	0.0003	.	.	.	.	.	.	.	.	.	0.0016	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm
BS 1141 *	0.004	0.0004	.	<0.005	[97.4]	<0.005	0.004	<0.05	<0.005	<0.005	.	0.006	.	.	0.0007	Disc 41 mm Ø x ~7 or 19+ mm
IARM 348A	(0.007)	(0.0013)	<0.02	0.0010	.	<0.006	0.027	(0.003)	(0.002)	(0.003)	<0.005	0.0112	<0.008	<0.003	(0.003)	Disc 31 mm Ø X 2 or 18 mm
BS 1144A	0.0052	(0.0003)	.	(0.0005)	97.3	(0.0004)	(0.002)	0.0019	(0.0006)	(0.002)	.	0.0079	.	.	(0.0006)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 199C	0.0059	0.0012	(0.003)	(0.0011)	.	(0.0002)	0.0016	0.0037	(0.001)	(0.003)	.	0.0084	(0.0007)	(0.0006)	.	Disc 31 mm Ø x 2(ok)or 18(last)mm
IARM Fe1144-22	0.0040	.	.	.	.	.	.	(0.002)	.	0.0017	.	0.0081	.	.	.	disc
BS 66K	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm
BS 66L	0.0020	(<0.0003)	.	(<0.0010)	.	.	(0.0012)	.	0.0007	0.0021	.	(0.0010)	.	.	.	Disc 44 mm Ø X ~7 or 19+ mm
ECRM 058-2D	0.0095	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm
BS 42	(0.006)	<0.005	.	<0.005	96.6	<0.005	(0.0012)	(0.003)	<0.005	.	.	(0.011)	<0.05	.	.	Disc 44 mm Ø X ~7 to 19 mm
IARM 381A	0.0055	.	.	.	.	.	0.0018	.	.	.	.	0.0137	.	.	.	Disc 31 mm Ø X 2 or 18 mm

SILICON STEEL ALLOYS

Alloy	ISO	#	Number	Si	C	Mn	P	S	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
300M. 4340 MOD		2	BS 4340M	1.65	0.414	0.74	0.004	<0.001	0.134	1.78	0.78	0.076	0.013	0.35	0.0020	.	0.056	.
6418	17034	1	BS 6418	1.54	0.255	1.41	(0.010)	0.0041	0.109	1.74	0.34	0.029	0.010	0.42	0.007	0.0036	(0.003)	<0.05
6418		2	BS 69B	1.27	0.258	1.28	0.008	0.013	0.086	1.71	0.28	0.024	0.035	0.39	0.0057	(0.002)	(0.002)	.
Hy-Tuff		1	IARM 342A	1.63	0.257	1.37	0.006	0.0051	0.110	1.76	0.38	0.019	0.008	0.42	0.0102	0.0028	0.023	(0.005)

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Unit
BS 4340M	.	.	.	.	.	.	(0.001)	.	.	0.009	.	.	.	Disc 37 mm Ø x ~7 mm LAST
BS 6418	(0.004)	0.0004	0.0002	[94.1]	0.0004	0.0022	0.0011	<0.005	(0.003)	(0.006)	<0.05	.	<0.005	Disc 57 mm Ø x ~7 or 19+ mm
BS 69B	.	.	.	.	.	.	.	.	.	0.006	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
IARM 342A	(0.006)	0.0004	(0.0001)	.	(0.0002)	(0.002)	0.0006	0.0008	0.0021	0.021	.	(0.001)	(0.002)	Disc 31 mm Ø x 2 or 18 mm

LOW ALLOY STEEL ALLOYS, CHART 1 of 3

1 = CRM, 2 = RM, 3 = RM with no uncertainties

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
16MnCr5		2	PV 102/1	0.186	1.226	0.024	0.018	0.184	0.109	0.140	0.995	.	.	0.030	.	.	.	.
20MoCr4		1	ECRM 197-1D	0.219	0.792	0.0073	0.0232	0.275	0.152	0.148	0.451	0.0313	0.0135	0.402	0.0114	0.0005	.	.
35MV7		1	IRSID 1750	0.359	1.801	0.0128	0.075	0.246	0.320	0.187	0.227	0.0175	(0.0120)	0.0433	0.0107	(0.0016)	0.114	(0.004)
41CAD7		1	IRSID 1749	0.411	0.733	0.0104	0.0157	0.193	0.188	0.190	1.734	1.034	0.0141	0.257	0.0066	0.0031	(0.0036)	(<0.0030)
300M	17034	1	BS 300A	0.416	0.716	0.0049	0.0008	1.71	0.118	1.87	0.798	0.098	0.0087	0.38	0.0023	0.0095	0.070	<0.01
300M	* Provisional	1	BS 300B	0.41	0.71	0.005	0.0007	1.65	0.067	1.86	0.79	0.040	0.012	0.40	<0.05	0.003	0.078	0.001
300M		1	IARM 340A	0.414	0.755	0.011	0.001	1.63	0.103	1.80	0.84	0.062	0.006	0.39	0.0020	0.0098	0.064	(0.005)
300M		1	IARM Fe300M-22	0.431	0.735	0.0046	(0.0008)	1.65	0.0713	1.90	0.773	0.051	0.033	0.393	0.0018	0.0018	0.075	0.0115
1345		2	BS XCCV	0.44	1.75	0.012	0.024	0.28	0.015	0.019	0.041	0.033	0.006	0.007	0.0056	(0.002)	(<0.003)	.
1513		1	IMZ 76	0.129	1.37	0.022	0.011	0.24	0.057	0.33	0.12	0.011	.	0.101	.	(0.003)	(0.006)	.
1526 MOD		1	SRM 1269	0.298	1.35	0.012	0.0061	0.189	0.095	0.108	0.201	0.016	.	0.036	.	.	0.004	.
1541		1	IPT 504	0.395	1.474	0.019	0.031	0.232	0.096	0.048	0.098	0.032	0.0077	0.009	0.0078	0.0011	.	.
3115		2	BS XCCT	0.158	0.52	0.005	0.011	0.28	0.027	1.27	0.65	0.006	0.017	0.020	0.0076	(0.002)	0.031	.
3310	17034	1	BS 3310	0.104	0.54	0.0092	0.0144	0.257	0.199	3.49	1.55	0.035	0.0096	(0.052)	0.0075	0.0010	0.0029	(0.003)
4130	17034	1	BS 4130A	0.318	0.56	0.016	0.0183	0.270	0.249	0.152	0.97	0.025	0.0068	0.206	0.0060	0.0009	0.0029	0.0025
4130		1	IARM 143F	0.308	0.573	(0.011)	0.0177	0.23	0.221	0.088	0.865	0.026	0.010	0.163	0.0098	(0.0012)	0.0046	(0.003)
4130		1	SRM 1225	0.274	0.48	0.007	0.014	0.221	.	0.018	0.91	.	.	0.166	.	.	0.004	.
4130H		1	IPT 501	0.277	0.723	0.016	0.030	0.208	0.083	0.063	1.05	0.034	0.008	0.210	0.0076	0.0015	.	.
4140		1	12X 41400B	0.452	0.764	0.0095	0.041	0.32	0.161	0.156	0.999	0.0137	.	0.177	0.0124	.	.	.
4140	25, LAST	2	BS 1962	0.41	0.94	0.007	0.011	0.242	0.224	0.16	1.05	0.018	0.008	0.229	0.0095	0.004	0.004	.
4140	17034	1	BS 4140C	0.43	0.922	0.010	0.026	0.29	0.260	0.131	0.94	0.0215	0.0078	0.169	0.0064	0.0009	0.0026	(0.003)
4140		1	IARM 30H	0.425	0.937	0.015	0.022	0.253	0.131	0.063	0.97	0.020	0.0071	0.199	0.0081	(0.0024)	(0.0040)	(0.007)
4140		1	IARM 30J	0.405	0.884	0.010	0.036	0.256	0.173	0.187	0.972	0.023	0.0098	0.205	(0.010)	0.0013	0.0045	(0.005)
4140		1	IARM Fe4140-19	0.401	(0.9)	0.008	0.022	0.22	0.23	0.14	1.1	0.031	0.009	0.17	0.0110	0.0009	0.0030	(0.003)
4150 Bi & S	LAST	2	BS 4150MOD	0.47	0.90	0.024	0.079	0.21	0.19	0.15	1.01	0.012	0.012	0.21	0.0087	(0.002)	0.008	.
4150 S	17034	1	BS 4150MOD-A	0.503	1.12	0.0172	0.062	0.253	0.192	0.095	0.799	0.0023	0.0070	0.170	0.0081	0.0018	0.029	0.0026
42CrMo4		2	PV 101/1	0.424	0.798	0.014	0.027	0.177	0.108	0.091	1.013	.	.	0.099	.	.	.	.
4320		2	BS 3961	0.215	0.565	0.016	0.022	0.236	0.133	1.67	0.510	0.022	(0.010)	0.27	0.0079	(<0.003)	(0.002)	.
4320	17034	1	BS 4320	0.191	0.599	0.0068	0.0026	0.259	0.050	1.73	0.518	0.024	0.0060	0.228	0.0049	0.0009	0.0016	<0.05
4330		1	IARM 330A	0.299	1.00	(0.005)	(0.001)	0.273	0.074	1.80	0.90	0.045	0.0063	0.404	0.0024	0.006	0.071	(0.004)
4330 MOD		1	IARM 330B	0.302	0.82	0.0075	(0.003)	0.227	0.084	1.856	0.807	0.023	0.013	0.406	.	.	0.076	0.024
4330M	17034	1	BS 4330MOD	0.316	0.92	0.0052	0.0010	0.269	0.105	1.83	0.848	0.031	0.034	0.478	0.0031	0.0027	0.083	(0.001)
4340	17025, 34	1	BS 4340	0.418	0.695	0.0119	0.0187	0.279	0.149	1.79	0.807	0.028	0.0068	0.231	0.0080	0.0014	0.0033	0.0012
4340	17025, 34	1	BS 4340A	0.423	0.766	0.0062	(0.0008)	0.253	0.128	1.80	0.879	0.031	0.0111	0.259	0.0102	(0.0011)	0.0024	0.0005
4340	17034	1	BS 4340B	0.42	0.658	0.0078	0.016	0.283	0.170	1.85	0.81	0.022	0.014	0.235	0.0060	0.0019	0.0033	(0.0028)
4340		1	IARM 31G	0.40	0.689	0.0136	(0.013)	0.262	0.183	1.814	0.820	0.0214	0.0083	0.223	0.0069	0.0015	0.0036	(0.004)
4340		1	IARM Fe4340-22	0.382	0.739	0.0079	0.0273	0.244	0.174	1.75	0.787	0.022	0.093	0.242	(0.007)	0.0010	0.0047	0.011
4615	17034	1	BS 3962	0.168	0.58	0.008	0.018	0.244	0.148	1.83	0.137	0.024	0.0072	0.22	0.007	(0.002)	(0.0016)	(0.004)
4615		2	BS 51E	0.15	0.59	0.010	0.021	0.28	0.22	1.75	0.14	0.028	0.035	0.21	0.0086	.	(0.0011)	.
4620		2	BS 4620	0.189	0.57	0.006	0.018	0.25	0.216	1.75	0.072	0.032	0.012	0.24	0.0078	(0.0026)	(0.0008)	(0.0009)
4620	17034	1	BS 51F	0.188	0.519	0.016	0.017	0.24	0.231	1.68	0.156	0.022	0.0086	0.224	0.0061	0.0012	0.0030	(0.0024)
4620		1	IARM 33D	0.209	0.593	0.009	0.023	0.207	0.072	1.78	0.139	0.026	0.008	0.229	0.0053	0.003	0.002	<0.005
4820		2	BS 4820	0.188	0.57	0.010	0.025	0.25	0.11	3.29	0.12	0.020	0.008	0.21	0.0079	.	(0.002)	.
4820	17025, 34	1	BS 4820A	0.203	0.64	0.008	0.014	0.185	0.212	3.28	0.116	0.029	0.008	0.203	0.0076	0.0012	0.0010	(0.002)
4820	17034	1	BS 4820B	0.199	0.67	0.0081	0.0113	0.269	0.221	3.32	0.116	0.038	0.012	0.251	0.0075	0.0013	0.0016	(0.003)
4820		1	IARM 155F	0.199	0.617	0.008	(0.013)	0.223	0.219	3.36	0.144	0.0356	0.012	0.244	(0.005)	0.0020	0.0015	(0.004)
4820		1	IARM Fe4820-18	0.192	0.541	(0.011)	0.0018	0.26	0.167	3.51	0.144	0.022	0.0107	0.287	0.007	(0.0011)	0.0015	(0.004)

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W

Number	As	B	Bi	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units
PV 102/1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm
ECRM 197-1D	0.0083	.	.	.	.	0.0009	(<0.0005)	0.0002	(<0.0002)	0.0018	0.0097	.	.	.	Disc 38 mm Ø x 25 mm
IRSID 1750	0.0188	(0.0002)	(0.00002)	(0.0002)	.	(<0.0002)	(<0.0010)	.	(<0.001)	0.0031	0.0137	(<0.0010)	(0.0012)	(0.0002)	Disc 38 mm Ø x 25 mm
IRSID 1749	0.0134	(<0.0005)	(<0.0002)	(0.0002)	.	0.0009	(<0.0005)	0.0002	(<0.0002)	0.0018	0.0148	.	(<0.0006)	(<0.0003)	Disc 41 mm Ø x 25 mm
BS 300A	0.0029	(0.00032)	.	0.0008	93.8	<0.0005	(0.002)	<0.01	<0.0005	0.0011	0.0065	0.0022	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm
BS 300B *	0.003	<0.005	.	<0.005	94.0	.	0.003	<0.005	<0.005	<0.05	0.005	<0.05	.	0.001	Disc 38 mm Ø x ~7 or 19+ mm
IARM 340A	(0.004)	0.0004	.	(0.0004)	.	(0.0002)	0.015	(0.001)	(0.001)	0.0021	0.005	.	(0.001)	(0.002)	Disc 31 mm Ø x 2 mm
IARM Fe300M-22	0.0038	.	.	.	.	.	.	.	.	.	0.0050	.	.	disc	
BS XCCV	0.0023	.	.	.	.	.	(<0.002)	(0.0018)	(<0.0006)	(0.0003)	(0.0004)	.	.	(<0.002)	Disc 36 mm Ø x ~7 or 19+ mm
IMZ 76	.	(0.001)	.	.	.	.	0.068	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm
SRM 1269	.	.	.	.	.	.	.	.	0.005	.	.	.	.	.	Disc 32 mm Ø x 19 mm
IPT 504	Als: 0.028	.	.	.	.	.	(0.012)	.	.	.	.	.	.	.	Disc 36 mm Ø x 20 mm
BS XCCT	0.004	.	.	.	.	.	(0.001)	(0.005)	(<0.001)	(0.0004)	(0.002)	.	.	(<0.002)	Disc 36 mm Ø x ~7 or 19+ mm
BS 3310	0.0058	(0.0008)	.	(0.001)	93.7	(0.0008)	(0.0009)	(0.0008)	(0.0005)	0.0019	0.0103	0.007	.	(0.001)	Disc 44 mm Ø x ~7 or 19+ mm
BS 4130A	(0.005)	0.0002	.	0.0010	97.2	<0.005	0.0014	0.0017	(0.0002)	0.0018	0.0093	(0.006)	.	(0.0012)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 143F	0.0051	.	.	.	.	.	(0.0015)	(0.003)	.	.	0.010	.	.	.	Disc 31 mm Ø X 2 or 18 mm
SRM 1225	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
IPT 501	.	.	.	.	.	.	.	.	.	.	0.008	.	.	.	Disc 34 mm Ø x 18 mm
12X 41400B	0.015	.	.	.	.	.	.	.	.	.	0.0099	.	0.0012	.	Disc ~38 mm Ø x ~20 mm
BS 1962	0.007	.	.	.	.	(0.0001)	.	.	(0.001)	.	0.010	.	.	.	Disc 41 mm Ø x ~7 mm
BS 4140C	0.0052	(0.0007)	.	0.0010	96.8	(0.0008)	0.0019	0.0011	(0.0006)	0.0021	0.0095	(0.01)	.	(0.0009)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 30H	0.0046	(0.0007)	(0.002)	(0.0009)	.	(0.001)	(0.003)	(0.0016)	(0.0005)	0.0013	0.008	.	(0.002)	(0.002)	Disc 31 mm Ø X 2 or mm
IARM 30J	(0.002)	.	.	.	.	.	0.0016	.	.	.	0.0109	.	.	.	Disc 31 mm Ø X 2 mm
IARM Fe4140-19	(0.005)	.	.	.	.	.	(0.002)	.	.	(0.004)	0.010	.	.	.	Disc 31 mm Ø x 2 or 18 mm
BS 4150MOD	0.005	.	0.070	0.0010	.	.	.	(0.003)	0.0010	.	0.013	.	.	.	Disc 38 mm Ø x ~7 mm
BS 4150MOD-A	0.0038	(0.0004)	.	(0.0007)	96.7	(0.0004)	(0.002)	0.0017	(0.0004)	(0.002)	0.0090	.	.	(0.0005)	Disc 38 mm Ø x ~7 or 19+ mm
PV 101/1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm
BS 4320	0.0036	0.0002	.	0.0005	96.4	0.0002	<0.05	0.0013	<0.005	(0.0015)	0.0040	<0.05	.	<0.05	Disc 38 mm Ø x ~7 or 19+ mm
BS 3961	.	.	.	.	.	.	.	.	.	.	(0.008)	.	.	.	Disc 44 mm Ø X ~7 or 19+ mm
IARM 330A	(0.003)	0.0003	.	0.0010	.	.	(0.003)	(0.0009)	(0.0004)	(0.001)	0.0039	.	.	0.0015	Disc 31 mm Ø x 2 mm
IARM 330B	.	.	.	.	.	.	(0.002)	.	.	.	0.0047	.	.	.	Disc 31 mm Ø X 2 or 18 mm
BS 4330MOD	0.0038	(0.0009)	.	(0.001)	95.1	(0.0002)	0.007	(0.001)	(0.001)	(0.0007)	0.0062	.	.	0.0016	Disc 44 mm Ø x ~7 or 19+ mm
BS 4340	0.0043	(0.0002)	.	0.0005	95.5	(0.0002)	(0.001)	0.0012	(0.0002)	(0.0013)	0.0063	.	.	0.0005	Disc 38 mm Ø x ~7 mm
BS 4340A	0.0059	(0.0002)	.	(0.0002)	95.4	0.0004	(0.002)	0.0007	(0.0003)	(0.0018)	0.0081	.	.	0.0016	Disc 38 mm Ø x 19 mm last
BS 4340B	0.009	<0.005	.	<0.005	95.5	0.0002	(0.0021)	0.0009	<0.005	0.0017	0.008	.	.	(0.0006)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 31G	(0.004)	0.0004	.	.	.	.	(0.0023)	.	.	.	0.0077	.	.	(0.0012)	Disc 31 mm Ø X 2 or mm
IARM Fe4340-22	0.0055	.	.	.	.	.	(0.003)	.	.	.	0.0083	.	.	disc	
BS 3962	0.0053	<0.005	.	(0.0001)	[96.6]	(0.00015	(0.0014)	(0.002)	<0.005	(0.003)	0.007	<0.05	.	(0.0011)	Disc 37 mm Ø x ~7 or 19+ mm
BS 51E	.	.	.	.	.	.	.	(0.004)	.	.	0.010	.	.	.	Disc 35 mm Ø x ~7 mm
BS 4620	(0.0084)	(0.00006)	.	(0.0001)	.	(0.0001)	(0.0001)	0.0009	(0.0002)	(0.0024)	0.013	.	(0.0002)	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 51F	(0.005)	(0.0002)	.	(0.0005)	[96.7]	(0.0001)	(0.0007)	(0.002)	(0.0008)	(0.003)	0.008	(0.005)	.	(0.0009)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 33D	0.0035	0.0002	.	(0.0003)	.	.	0.002	0.0013	<0.001	(0.002)	0.005	.	.	<0.002	Disc 31 mm Ø x 2 or 18 mm
BS 4820	0.005	.	.	0.0046	.	.	.	0.0027	.	.	(0.008)	.	.	.	Disc 38 mm Ø x ~7 mm
BS 4820A	0.006	0.0002	.	0.0003	.	0.0003	(0.002)	0.0011	(0.0002)	0.0024	0.0097	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 4820B	0.0055	(0.0003)	.	0.0004	94.8	0.0004	0.0022	(0.0015)	(0.0003)	0.0028	0.0098	(0.0020)	.	0.0017	Disc 38 mm Ø x ~7 or 19+ mm
IARM 155F	(0.006)	.	.	.	.	.	0.0016	(0.003)	.	.	0.0084	.	.	.	Disc 31 mm Ø X 2 or 18 mm
IARM Fe4820-18	(0.006)	.	.	.	.	.	(0.002)	(0.003)	.	.	0.0089	.	.	.	Disc 31 mm Ø x 2 or 18 mm

Number	As	B	Bi	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units

LOW ALLOY STEEL ALLOYS, CHART 2 of 3

1 = CRM, 2 = RM, 3 = RM with no uncertainties

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
5140H		1	IARM Fe5140H-18	0.37	0.93	0.014	0.022	0.187	0.253	0.266	0.67	0.13	0.0081	0.031	0.007	0.0015	(0.0024)	(0.003)
5160		1	IMZ 116	0.64	0.94	0.025	0.035	0.25	0.33	0.022	0.72	0.025	.	0.074	0.0130	(0.0008)	0.076	.
6150		2	BS 4941	0.490	0.79	0.012	0.017	0.27	0.106	0.074	0.96	0.024	0.008	0.039	0.0076	.	0.164	.
6150		1	IARM Fe6150-22	0.512	0.813	0.026	0.0024	0.303	0.135	0.098	0.912	0.027	0.0081	0.0170	0.0100	0.0014	0.161	0.007
8620		1	12X 86200-21	0.211	0.811	0.0128	0.0224	0.237	0.199	0.551	0.507	0.0241	0.0072	0.190	0.0082	.	0.0039	(0.003)
8620	LAST	2	BS 1931	0.194	0.84	0.007	0.018	0.235	0.116	0.42	0.50	0.021	0.012	0.168	0.0079	.	0.002	.
8620	17034	1	BS 8620G	0.215	0.799	0.0094	0.020	0.264	0.191	0.58	0.568	0.027	0.0077	0.205	0.0080	0.0011	0.0018	(0.0022)
8620		1	IARM Fe8620-18	0.211	0.857	0.012	0.026	0.23	0.197	0.446	0.536	0.0246	0.0085	0.197	0.007	0.0015	0.0061	(0.004)
8620		1	IPT 502	0.210	0.823	0.018	0.026	0.198	0.121	0.408	0.485	0.024	0.0083	0.155	0.0069	0.0016	.	.
8620 + Bi	LAST	2	BS 8620A	0.184	0.80	0.008	0.079	0.21	0.15	0.44	0.48	0.016	0.010	0.16	0.0107	(0.002)	0.004	.
8630	17034	1	BS 8630	0.315	0.752	0.0032	0.0043	0.261	0.046	0.544	0.477	0.023	0.0029	0.194	0.0038	0.0008	0.0006	(0.001)
8740	17034	1	BS 8740	0.39	0.86	0.011	0.023	0.25	0.16	0.55	0.49	0.037	0.0086	0.27	0.0073	0.0012	0.0024	0.0023
8740		1	IARM 252C	0.416	0.92	0.025	0.008	0.248	0.109	0.505	0.501	0.017	0.008	0.205	0.0083	0.001	0.005	<0.005
8740		1	IARM 252D	0.423	0.842	0.0075	0.0128	0.256	0.270	0.424	0.468	0.024	0.0078	0.204	0.0068	0.0012	0.0022	(0.004)
8740		1	IARM 252E	0.413	0.87	(0.009)	(0.012)	0.257	0.164	0.407	0.486	0.028	0.0093	0.204	0.0064	0.0010	(0.0028)	.
8740		1	IARM 252F	0.406	0.88	0.011	0.009	0.247	0.182	0.412	0.463	0.026	0.0086	0.210	0.0059	0.0010	(0.003)	(0.003)
8822	17034	1	BS 8822A	0.212	0.852	0.020	0.031	0.287	0.030	0.569	0.562	(0.010)	0.0042	0.378	0.0086	0.0015	0.0028	<0.005
9310	LAST	2	BS 58C	0.098	0.57	0.011	0.014	0.29	0.14	3.20	1.29	(0.055)	.	0.11	.	.	.	.
9310	LAST	2	BS 58D	0.127	0.45	0.010	0.005	0.32	0.156	3.02	1.35	0.042	0.009	0.14	0.0147	.	0.005	.
9310	17034	1	BS 9310	0.091	0.638	0.010	0.0053	0.224	0.146	3.04	1.16	0.028	0.013	0.093	0.0107	0.0011	0.0035	<0.05
9310		1	IARM FeE9310-18	0.121	0.62	0.009	0.0128	0.256	0.158	3.07	1.09	0.036	0.009	0.086	0.0070	.	0.0030	.
9325	LAST	2	BS 9325	0.25	0.91	0.008	0.007	0.32	0.13	3.29	1.48	0.030	0.010	0.31	0.0089	.	0.004	.

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W

Number	As	B	Bi	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units	
IARM Fe5140H-18	(0.011)	.	.	.	.	.	(0.0015)	.	.	.	0.0069	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
IMZ 116	Als: 0.012	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
BS 4941	(0.004)	.	.	(0.0002)	.	.	.	0.0017	.	.	0.006	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	
IARM Fe6150-22	0.0060	.	.	0.0014	.	.	.	0.0014	.	0.0016	0.0069	.	.	.	Disc 38 mm Ø x 3 or 19 mm	
12X 86200-21	0.0045	.	.	.	.	.	0.0014	.	.	0.0024	0.0094	.	.	(0.0014)	Disc 38 mm Ø x 19 mm	
BS 1931	0.007	.	.	(0.0008)	.	.	.	(0.0052)	.	.	0.007	.	.	.	Disc 41 mm Ø x ~7 mm	
BS 8620G	0.0049	0.0002	.	0.0015	97.1	(0.0004)	0.0020	0.0032	<0.005	0.0020	0.0095	<0.0005	<0.005	(0.0007)	Disc 38 mm Ø x ~7-or 19+ mm	
IARM Fe8620-18	0.009	.	.	.	.	.	(0.0014)	.	.	.	0.0090	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
IPT 502	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 36 mm Ø x 20 mm	
BS 8620A	0.007	.	0.073	0.0003	.	.	.	(0.004)	(0.001)	.	0.009	.	.	.	Disc 38 mm Ø x ~7 mm	
BS 8630	0.0038	(0.0002)	.	(0.0007)	97.3	(0.0007)	(0.0006)	0.0008	(0.0007)	0.0012	0.0029	.	.	(0.001)	Disc 44 mm Ø x 19+ mm	
BS 8740	0.0051	0.0003		(0.0003)	96.91	(0.0002)	(0.0007)	(0.001)	(0.0003)	0.0017	0.008	(0.003)	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm	
IARM 252C	0.004	(0.0001)	.	(0.0003)	.	.	0.002	(0.002)	0.001	<0.005	0.007	.	.	<0.002	Disc 31 mm Ø x 2 mm	
IARM 252D	0.0053	(0.0002)	(0.0005)	(0.001)	.	(0.0002)	0.0013	(0.0013)	(0.0004)	0.0024	0.012	.	(0.0005)	(0.0013)	Disc 31 mm Ø x 2 mm	
IARM 252E	0.0046	.	.	.	.	.	.	.	.	.	0.0075	.	.	.	Disc 31 mm Ø X 2 or 18 mm	
IARM 252F	(0.006)	.	.	.	.	.	0.0016	.	.	.	0.006	.	.	.	Disc 31 mm Ø X 2 or 18 mm	
BS 8822A	0.0027	0.0004	.	(0.0002)	96.9	.	0.0024	0.0068	0.0005	(0.0016)	(0.003)	0.007	<0.01	(0.002)	Disc 37 mm Ø x 25 mm	
BS 58C	.	.	.	.	.	.	.	.	.	.	(0.012)	.	.	.	Disc 39 mm Ø x ~17 mm	
BS 58D	.	.	.	.	.	.	.	.	.	.	0.012	.	.	.	Disc 41 mm Ø x ~7 mm	
BS 9310	0.0048	<0.005	.	0.0002	94.5	<0.005	<0.05	0.0009	<0.005	0.0019	0.0078	.	<0.005	0.0010	Disc 41 mm Ø x ~7 or 19 mm	H: 0.0002
IARM FeE9310-18	.	.	.	.	94.6	.	.	(0.0017)	.	.	0.0072	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
BS 9325	0.004	.	.	0.0049	.	.	.	0.0010	.	.	0.009	.	.	.	Disc 38 mm Ø x ~7 mm	

Number	As	B	Bi	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Unit	

LOW ALLOY STEEL ALLOYS, CHART 3 of 3

1 = CRM, 2 = RM, 3 = RM with no uncertainties

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
A-193 B-16	LAST	2	BS 4942	0.414	0.56	0.015	0.021	0.22	0.165	0.16	0.97	(0.004)	0.010	0.54	0.0080	.	0.28	.
A-193 B-16	17025, 34	1	BS 4942A	0.393	0.64	(0.007)	0.0013	0.275	0.067	0.058	0.976	0.011	0.0077	0.538	0.0072	0.0031	0.280	(0.0009)
A-242		1	IPT 500A	0.107	0.842	0.016	0.0049	0.281	0.270	0.018	0.611	0.046	0.0044	0.0018	0.0092	0.0015	0.0029	.
A-485-1		2	BS A485-1	0.98	1.10	0.019	0.004	0.62	0.16	0.13	1.07	0.017	0.010	0.029	0.0060	0.003	0.003	.
A615-75		1	IARM 378A	0.274	1.38	0.018	0.037	0.307	0.299	0.142	0.187	(0.0029)	0.013	0.031	(0.02)	(0.003)	0.0844	(0.006)
A706-60		1	IARM 380A	0.268	1.24	0.021	0.025	0.181	0.265	0.114	0.192	0.0029	(0.010)	0.059	(0.012)	.	0.0475	(0.009)
A706-60		1	IARM 380B	0.243	1.27	0.016	0.027	0.238	0.307	0.182	0.153	(0.0021)	0.014	0.055	(0.013)	0.0011	0.049	(0.003)
C6MnCr5 + Ni		1	IMZ 162	0.19	1.31	0.021	0.014	0.59	0.077	1.64	0.91	(0.040)	.	0.52	.	0.12	0.045	.
DP1080		1	IARM FeDP1080-18	0.110	1.88	0.014	(0.006)	0.11	0.042	0.554	0.554	(0.002)	0.069	0.445	(0.009)	(0.0013)	(0.0043)	(0.030)
E52100	17034	1	BS E52100	0.99	0.371	0.011	0.004	0.270	0.090	0.066	1.54	0.019	0.0067	0.0209	0.0057	(0.0010)	0.0046	(0.0015)
E52100		1	IARM 49E	1.03	0.364	(0.006)	(0.002)	0.248	0.076	0.043	1.43	0.024	(0.006)	0.017	(0.003)	0.0060	0.066	.
E52100+Bi	LAST	2	BS 53MOD	1.01	0.36	0.011	0.012	0.26	0.070	0.072	1.37	0.019	0.007	0.024	0.0086	.	0.005	.
F-1	17034	1	BS 3952	0.208	0.543	0.011	0.021	0.263	0.201	0.111	0.104	0.048	(0.003)	0.525	0.0006	(0.002)	0.0014	<0.005
F-1		1	IARM 229B	0.220	0.858	0.0073	0.0106	0.329	0.0153	0.030	0.017	0.025	0.0116	0.495	0.0072	0.0019	0.0059	(0.003)
F-1		1	IARM FeF1-21	0.235	0.811	0.012	0.0060	0.278	0.0125	0.058	0.188	0.028	0.0095	0.48	0.0070	0.0021	0.0191	0.0022
F-1		2	RM Fe 2/4	0.26	0.61	0.039	0.016	0.30	0.30	0.68	0.70	(0.001)	0.29	0.47	0.020	(0.0065)	0.46	0.19
F-5		2	BS 47A	0.130	0.44	0.017	0.015	0.27	0.11	0.12	4.22	0.015	0.011	0.47	0.018	0.003	0.016	.
F-5		2	BS 47B	0.122	0.39	0.014	0.022	0.22	0.12	0.105	4.78	0.018	.	0.45	0.023	.	0.004	.
F-5		1	IARM 37C	0.096	0.408	0.014	(0.004)	0.31	0.121	0.148	4.34	(0.010)	0.015	0.500	0.008	(0.0025)	0.017	(0.012)
F-9	17025, 34	1	BS 48B	0.110	0.365	0.0228	0.0068	0.75	0.070	0.165	8.78	0.0157	0.0165	0.949	0.0088	0.0031	0.033	0.026
F-11	17034	1	BS 45B	0.140	0.502	0.0068	0.017	0.583	0.101	0.136	1.14	0.030	0.0090	0.60	0.0066	0.0024	0.0083	(0.0038)
F-11	17034	1	BS 45C	0.116	0.482	0.0077	0.016	0.69	0.129	0.078	1.37	0.018	0.0059	0.57	0.0082	0.0012	0.0028	(0.003)
F-11		1	IARM FeF11-21	0.114	0.530	0.0067	0.0141	0.679	0.123	0.069	1.349	0.018	0.0062	0.614	.	0.0015	0.0038	.
F-22	25, LAST	1	BS 1982	0.128	0.441	0.012	0.026	0.255	0.177	0.197	2.09	0.021	0.010	0.89	0.0097	(0.001)	0.003	.
F-22	17025, 34	1	BS 46B	0.126	0.472	0.0087	0.0187	0.219	0.128	0.081	2.28	0.020	0.0074	1.00	0.0100	(0.001)	0.0073	0.0008
F-22		1	IARM 36C	0.14	0.49	0.009	0.014	0.25	0.142	0.085	2.43	(0.017)	(0.008)	0.98	0.008	.	0.0061	.
F-22		1	SRM 1270	0.077	0.626	0.0065	0.0065	0.247	0.114	0.174	2.34	.	0.038	0.956	.	.	0.013	.
F-22		1	SRM 1270A	0.0794	0.636	0.00401	0.00635	0.237	0.1168	0.1772	2.317	.	0.0399	0.9422	.	0.00158	0.01298	.
F-22 + Cr		2	HRT FE2009-N	0.12	0.55	0.010	0.003	0.32	0.08	0.25	2.56	0.030	.	1.02	.	.	0.015	.
F-91		1	13X 90901A	0.102	0.447	0.0148	0.0009	0.429	0.039	0.249	8.43	0.021	.	0.905	0.0472	(0.0025)	0.208	0.009
F-91	17025, 34	1	BS 9905A	0.113	0.465	0.0133	0.0040	0.34	0.091	0.152	8.75	0.0186	0.0136	0.95	0.034	0.0023	0.216	0.0024
F-91		2	HRT FE2003-H	0.104	0.46	0.013	0.002	0.43	0.05	0.26	8.66	(0.004)	0.013	0.93	.	.	0.217	.
F-91		1	IARM Fe91-18	0.099	0.453	0.015	(0.002)	0.27	0.041	0.187	8.24	(0.006)	0.013	0.94	0.046	(0.0021)	0.198	(0.003)
HSLA 100		1	SRM 1271	0.064	0.73	0.005	0.0013	0.334	1.48	3.34	0.552	0.020	.	0.543	.	.	0.003	.
HY 130		1	SRM 1226	0.085	0.274	0.0022	0.0044	0.231	0.125	5.42	0.467	0.054	0.029	0.446	.	0.0021	0.0018	(0.005)
HY 80		1	SRM 1286	0.196	0.152	0.008	0.017	0.130	0.043	2.81	1.53	0.109	0.116	0.344	.	0.040	0.0057	(0.013)
LF-2	17025, 17034	1	BS LF2C	0.21	1.02	0.012	0.0182	0.263	0.153	0.099	0.152	0.029	0.0100	0.029	0.0096	0.0019	0.0014	0.0023
LF-3, A-333.3		2	BS LF3	0.183	0.52	0.006	0.018	0.206	0.080	3.36	0.098	0.017	0.056	0.056	0.0054	.	(0.002)	.
LF-3, A-333.3		1	BS LF3A *	0.14	0.55	0.020	0.022	0.23	0.051	3.55	0.13	0.050	0.061	0.053	0.011	0.026	0.029	0.030
Nitriding 135	LAST	2	BS 68B	0.39	0.52	0.010	0.020	0.26	0.163	0.165	1.51	1.08	0.010	0.309	0.0073	0.005	0.007	.
Nitriding 135	17025, 34	1	BS 68E	0.406	0.560	0.005	0.0004	0.296	0.134	0.147	1.49	1.09	0.007	0.322	0.0030	0.009	0.0031	(<0.001)
Nitriding 135		1	IARM 305B	0.425	0.58	0.011	0.014	0.349	0.214	0.156	1.63	0.92	0.007	0.32	0.0044	0.0044	0.004	(0.004)
P-20 MOD	17034	1	BS 55H	0.394	1.43	0.012	0.0040	0.323	0.156	0.93	1.82	0.025	0.0149	0.144	0.0052	0.0020	0.0047	0.0013
T23		1	IARM FeT23-18	0.068	0.82	0.012	0.006	0.18	0.046	0.53	2.47	.	0.085	0.261	(0.003)	(0.004)	0.238	1.60

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W

Number	As	B	Bi	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units
BS 4942	0.005	.	.	0.0006	.	.	.	(0.0021)	.	.	0.014	.	.	.	Disc 38 mm Ø x ~7 mm
BS 4942A	0.0031	(0.0001)	.	0.0012	96.8	0.0004	(0.0015)	0.0020	(0.0007)	(0.001)	0.0044	.	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm
IPT 500A	0.0020	(0.0004)	.	(0.0025)	.	.	0.0083	.	.	.	0.0018	.	.	.	Disc 35 mm Ø x 15 mm
BS A485-1	0.006	.	.	.	.	.	.	(0.0008)	.	.	0.011	.	.	.	Disc 39 mm Ø x ~7 or 19+ mm
IARM 378A	.	(0.0006)	.	.	.	.	(0.003)	.	.	.	0.0236	.	.	.	Disc 31 mm Ø x 2 or 18 mm
IARM 380A	(0.007)	.	.	.	.	.	(0.0020)	.	.	.	0.0117	.	.	.	Disc 31 mm Ø X 2 mm
IARM 380B	0.0058	.	.	.	.	.	(0.0016)	.	.	.	0.0132	.	.	.	Disc 31 mm Ø X 2 or 18 mm
IMZ 162	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm
IARM FeDP1080-18	.	.	.	.	.	.	0.014	(0.0055)	.	.	(0.0064)	.	.	.	Disc 31 mm Ø x 2 or 18 mm
BS E52100	0.0033	.	.	0.0006	96.6	<0.0005	(0.0010)	0.0009	<0.0005	0.0011	0.0049	.	.	<0.005	Disc 38 mm Ø x ~7 or 19+ mm
IARM 49E	0.0029	.	.	.	.	.	(0.003)	(0.002)	.	.	0.0065	.	.	.	Disc 31 mm Ø X 2 or 18 mm
BS 53MOD	0.004	.	0.102	(0.001)	.	.	.	(0.002)	0.0005	.	0.008	.	.	.	Disc 38 mm Ø x ~12 to 19 mm
BS 3952	<0.005	0.0003	.	<0.005	98.0	(0.00008)	<0.005	.	(0.0009)	0.0034	(0.0009)	(0.003)	.	<0.005	Disc 39 mm Ø x ~7 or 19+ mm
IARM 229B	(0.002)	(0.0006)	.	(0.0003)	.	.	(0.0019)	(0.0017)	(0.0005)	(0.0006)	0.0012	(0.003)	.	(0.0008)	Disc 31 mm Ø x 2 mm
IARM FeF1-21	0.0021	0.0010	.	.	.	.	0.0087	0.0024	0.0009	.	0.0016	.	.	0.0014	Disc 38 mm Ø x ~2 or 19 mm
RM Fe 2/4	0.04	(0.0027)	.	<0.001	.	.	(0.011)	.	<0.02	<0.03	0.04	.	.	<0.02	Disc 40 mm Ø x 40 mm
BS 47A	.	.	.	.	.	.	0.002	(0.003)	.	.	0.008	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 47B	0.004	.	.	.	.	.	.	(0.004)	.	.	0.006	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
IARM 37C	(0.009)	.	.	.	.	.	(0.004)	.	.	.	0.009	.	.	.	Disc 31 mm Ø X 2 or 18 mm
BS 48B	0.0048	(0.0002)	.	(0.003)	88.7	(0.0002)	(0.001)	0.0022	(0.0002)	(0.001)	0.0049	.	(0.0003)	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm
BS 45B	0.0066	(0.0003)	.	0.0008	96.7	(0.0004)	(0.002)	0.0015	(0.15)	(0.003)	0.0069	.	.	(0.0009)	Disc 38 mm Ø x ~7 or 19 mm last
BS 45C	(0.003)	0.0003	.	0.0008	96.5	0.0002	(0.002)	0.0010	<0.005	(0.002)	0.0071	.	.	<0.05	Disc 38 mm Ø x ~7 or 19+ mm
IARM FeF11-21	0.0048	0.0004	.	.	.	.	.	.	.	0.0017	0.0084	.	.	.	Disc 38 mm Ø x 2 or 19 mm
BS 1982	0.007	.	.	.	.	.	(<0.003)	0.0017	(0.0003)	0.002	0.013	.	.	.	Disc 39 mm Ø x ~7 or ~18 mm
BS 46B	0.0041	.	.	.	95.7	(0.0003)	(0.003)	0.0026	(0.001)	(0.002)	0.0073	.	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 36C	(0.005)	.	.	.	.	.	.	.	.	.	(0.008)	.	.	.	Disc 31 mm Ø x 2 or 18 mm
SRM 1270	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
SRM 1270A	0.0172	0.00448	.	.	.	.	.	.	.	.	0.01609	.	.	0.0064	Disc 32 mm Ø x 19 mm
HRT FE2009-N	.	.	.	0.0020	.	.	.	.	.	.	.	.	0.004	.	Disc 40 mm Ø x 40 mm
13X 90901A	.	.	.	.	.	.	0.070	.	.	.	0.0020	.	.	.	Disc ~40 mm Ø x ~15 mm
BS 9905A	0.0065	(0.0005)	.	(0.0002)	88.9	(0.0004)	0.074	0.0024	(0.002)	(0.003)	0.0060	(0.01)	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm
HRT FE2003-H	.	0.0004	.	.	.	.	0.064	.	.	.	.	.	.		Disc 40 mm Ø x 20 mm
IARM Fe91-18	.	.	.	.	.	.	0.070	(0.003)	.	.	(0.004)	.	.	.	Disc 31 mm Ø x 2 or 18 mm
SRM 1271	.	.	.	.	.	.	0.025	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
SRM 1226	.	.	.	.	.	.	(0.005)	.	(0.0001)	.	(0.003)	.	.	(0.010)	Disc 32 mm Ø x 19 mm
SRM 1286	0.019	(0.006)	.	.	.	.	(0.012)	.	(0.0002)	.	0.012	.	.	(0.021)	Disc 32 mm Ø x 19 mm
BS LF2C	0.0042	0.0002	.	0.0002	98.0	(0.0003)	0.0009	0.0018	0.0004	<0.05	0.011	<0.05	<0.005	0.0008	Disc 44 mm Ø x ~7 or 19 mm
BS LF3	0.006	0.0001	.	(0.0001)	.	.	.	0.004	.	.	0.006	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
.BS LF3A *	0.011	0.0005	.	0.003	[95.0]	0.0001	0.030	<0.05	0.002	0.009	0.031	0.004	.	0.022	Disc 37 mm Ø x ~7 or 19+ mm * Provisional
BS 68B	.	.	.	.	.	.	.	.	.	.	0.010	.	.	.	Disc 41 mm Ø x 15-19 mm
BS 68E	(0.003)	0.0002	.	(0.0003)	.	0.0004	(0.002)	0.0007	(<0.001)	(<0.001)	0.0056	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
IARM 305B	(0.006)	0.0006	.	0.0007	.	(0.002)	0.002	0.0006	(0.0003)	(0.004)	0.011	.	(0.002)	0.0011	Disc 31 mm Ø X 2 or 18 mm
BS 55H	0.0041	0.0007	.	0.0013	94.7	<0.005	(0.004)	0.0007	(0.0002)	(0.0014)	0.011	<0.05	<0.005	(0.0011)	Disc 38 mm Ø x ~7-or 19+ mm
IARM FeT23-18	.	0.0020	.	.	.	.	0.052	0.0044	.	.	(0.004)	.	.	.	Disc 31 mm Ø x 2 or 18 mm

Number	As	B	Bi	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units

TOOL STEEL ALLOYS, CONTINUED ON THE NEXT PAGE

1 = CRM, 2 = RM, 3 = RM with no uncertainties

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
9-4-30		1	IARM 341A	0.298	0.226	0.0038	0.0008	0.10	0.143	7.16	0.99	0.032	4.4	1.01	0.0025	0.003	0.086	(0.01)
709	LAST	2	CT X67975	0.48	0.56	0.009	0.005	0.28	0.060	0.13	1.00	.	.	0.53	.	.	0.30	.
6150		1	IARM 34C	0.50	0.739	0.0090	0.0011	0.30	0.078	0.085	0.914	0.068	0.005	0.022	0.0030	0.0045	0.206	(0.003)
6526		2	BS 9-4-30	0.316	0.22	0.008	<0.002	0.06	0.088	7.25	1.00	0.004	4.46	1.01	0.0014	.	0.09	.
A-10		2	BS A-10	1.41	1.75	0.016	0.022	1.15	0.016	1.82	0.24	0.006	(0.010)	1.53	.	.	(0.004)	<0.005
A-11		2	BS 10V	2.46	0.52	0.019	0.079	0.89	0.076	0.08	5.41	(<0.002)	0.009	1.30	0.064	.	9.50	0.013
A-11	17025, 34	1	BS A-11	2.42	0.507	0.023	0.123	0.98	0.092	0.25	5.21	0.0054	0.044	1.25	0.110	0.0019	9.24	(0.080)
A-2		2	BS 36C	0.96	0.46	0.023	0.027	0.31	0.18	0.19	5.01	.	0.03	0.99	.	.	0.11	(0.04)
A-2		2	BS 36D	0.97	0.68	0.021	0.007	0.27	0.060	0.089	5.25	0.010	0.010	0.96	0.0108	.	0.29	0.028
A-2	* Provisional	1	BS 36E *	0.98	0.55	0.019	0.002	0.27	0.052	0.14	4.91	0.014	0.014	0.99	0.009	0.003	0.20	0.015
A-2		2	CT A2	0.95	0.72	0.010	0.004	0.40	0.06	0.10	5.13	.	.	1.05	.	.	0.22	.
A-2		1	IARM 39B	0.99	0.54	0.017	0.003	0.35	0.10	0.14	4.79	0.006	0.014	1.01	0.0096	0.003	0.22	(0.026)
A-2		1	IARM 39C	0.99	0.45	0.019	0.007	0.28	0.077	0.144	4.99	0.017	0.013	0.97	0.011	0.0029	0.21	0.011
A-6		2	BS 40B	0.71	2.28	0.020	0.006	0.35	0.076	0.089	1.18	0.002	0.020	1.07	0.0076	0.002	0.10	0.11
A-6		1	IARM 40B	0.68	1.98	0.012	0.003	0.39	0.050	0.096	1.04	(0.006)	0.015	1.22	0.0107	0.003	0.014	0.013
A-6		1	IARM 40C	0.72	1.91	0.014	0.012	0.32	0.142	0.255	0.99	0.019	0.010	1.27	0.0083	0.008	0.010	0.009
CPM15V	17025, 34	1	BS PM15	3.54	0.416	0.0198	0.0127	0.912	0.142	0.203	5.33	0.0025	0.0330	1.22	0.111	0.0029	14.79	0.109
CPM15V		1	IARM Fe15V-18	3.51	0.39	0.022	0.010	0.89	0.084	0.123	5.5	.	0.018	1.24	.	0.0027	15.6	0.080
D-2		2	BS 37D	1.54	0.28	0.021	0.015	0.29	0.063	0.21	11.07	0.07	1.09	0.016	.	.	0.80	0.16
D-2	LAST	2	BS 37E	1.51	0.29	0.024	0.002	0.37	0.053	0.34	11.54	0.002	0.021	0.79	0.052	0.002	0.78	0.021
D-2	LAST	1	BS 37G	1.663	0.326	0.021	0.0007	0.352	0.044	0.152	11.77	0.0060	0.0166	0.78	0.0310	0.0025	0.70	0.034
D-2	* Provisional	1	BS 37H *	1.56	0.30	0.027	0.001	0.31	0.20	0.35	11.7	0.010	0.020	0.79	0.030	0.002	0.61	0.028
D-2		2	CT D2	1.53	0.48	0.013	0.005	0.40	0.04	0.10	11.46	.	0.02	0.75	.	.	0.89	<0.01
D-2		1	IARM 41D	1.519	0.256	0.021	0.012	0.256	0.047	0.114	11.5	0.014	(0.020)	0.74	0.0152	(0.003)	0.77	0.034
D-6	17025, 34	1	BS D-6	0.472	0.78	0.007	0.0008	0.228	0.130	0.602	0.99	0.037	0.012	1.01	0.0031	0.0025	0.122	0.0018
D-6	17034, LAST	1	BS D-6A	0.47	0.78	0.0076	0.0010	0.232	0.136	0.60	0.99	0.038	0.013	1.00	0.0031	0.0024	0.123	0.0019
D-6 AC		1	IARM 299A	0.469	0.70	0.008	0.002	0.22	0.100	0.57	1.03	0.092	0.0054	0.99	0.0028	0.0038	0.120	0.010
D-7		1	DSZU C082	2.32	0.33	0.029	0.014	0.36	0.118	0.239	12.24	.	0.035	1.11	.	.	4.02	0.17
D-11		1	IARM 35L	0.119	0.535	0.007	0.014	0.679	0.123	0.071	1.35	0.017	0.0070	0.607	0.0072	(0.0015)	0.0037	(0.004)
F-2	LAST	2	CT X27081	1.32	0.20	0.004	0.001	0.24	0.026	0.031	0.052	.	.	0.008	.	.	.	3.39
H-10		2	BS 49	0.36	0.33	0.014	0.015	0.92	0.072	0.20	3.51	0.004	2.00	2.41	0.0186	0.003	0.62	0.31
H-11		2	BS TH11	0.423	0.31	0.016	0.005	0.88	0.041	0.11	5.04	.	(0.008)	1.27	.	.	0.46	(0.01)
H-11		1	ECRM 276-2D	0.399	0.365	0.0093	0.0189	1.034	0.183	0.203	4.975	.	.	1.134	0.0116	.	0.296	.
H-11		1	IARM 255A	0.403	0.27	0.013	0.0012	0.93	0.049	0.083	4.84	0.01	0.009	1.33	0.0067	0.002	0.43	0.007
H-11		1	IARM 255B	0.389	0.317	0.010	(0.002)	0.91	0.073	0.062	4.82	0.032	0.0090	1.30	(0.005)	.	0.515	.
H-11		1	IMZ 173	0.30	0.43	0.029	0.020	1.15	0.32	0.42	5.52	0.060	(0.013)	1.50	0.0342	(0.002)	0.47	0.10
H-12		2	BS TH12	0.372	0.40	0.020	0.005	0.92	0.064	0.16	5.02	.	0.07	1.41	.	.	0.62	1.06
H-13		2	BS 34D	0.395	0.38	0.017	0.005	1.06	0.049	0.10	5.15	.	0.031	1.24	.	.	0.94	0.10
H-13	17034	1	BS H-13A	0.391	0.445	0.0187	(0.003)	1.13	0.083	0.139	5.11	(0.03)	0.033	1.32	0.034	(0.03)	0.92	0.100
H-13		2	CT H13	0.39	0.30	0.015	0.005	1.05	0.061	0.10	5.23	.	.	1.36	.	.	1.02	.

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
H-13		1	IARM 42C	0.382	0.40	0.022	0.0037	0.85	0.066	0.051	4.86	0.018	0.022	1.29	0.0201	0.0125	0.84	0.32
H-13		1	IMZ 174	0.33	0.32	0.029	0.023	0.93	0.17	0.13	5.10	0.080	0.011	1.24	0.0288	(0.001)	0.98	0.021
H-19	17025, 34	1	BS H-19	0.404	0.318	0.014	0.011	0.29	0.055	0.114	4.27	<0.001	4.17	0.356	0.0190	(0.002)	2.05	4.02
L-2, 6150	17034	1	BS 43A	0.49	0.82	0.0074	0.025	0.252	0.18	0.24	0.92	(0.003)	0.008	0.059	0.0072	(0.002)	0.145	(0.005)
L-6	17025, 34	2	BS 39B	0.67	0.62	0.009	0.019	0.214	0.163	1.45	0.79	(0.011)	(0.02)	0.17	.	.	(0.01)	.
L-6		1	IARM FeL6-18	0.718	0.605	0.013	0.0017	0.264	0.027	1.34	0.71	0.020	0.007	0.237	0.0064	0.0033	0.008	.
M-1		2	BS TM1	0.86	0.23	0.007	0.012	0.46	0.054	0.057	3.72	.	0.45	8.4	.	.	1.05	1.7
M-1		2	CT M1	0.80	0.30	0.012	0.005	0.22	0.087	0.12	3.91	.	.	8.22	.	.	1.05	1.58
M-1		1	IARM 304A	0.857	0.260	0.019	0.0016	0.36	0.14	0.133	3.55	0.009	0.278	8.04	0.034	0.002	1.23	1.65
M-1		1	IARM FeM1-18	0.85	0.318	0.013	(0.003)	0.44	0.091	0.104	3.67	0.007	0.226	8.0	0.037	0.0044	1.19	1.98
M-2		2	BS 32D	0.85	0.30	0.027	0.0022	0.25	0.039	0.053	4.14	0.018	0.010	4.92	0.018	.	1.82	6.15
M-2		2	CT M2	0.82	0.33	0.012	0.004	0.27	0.06	0.25	4.03	.	0.05	4.96	.	.	1.81	6.47
M-2	LAST	1	IARM 44C	0.82	0.301	0.027	0.004	0.31	0.12	0.132	4.04	0.05	0.247	5.02	0.033	0.004	1.91	6.0
M-2		1	IARM FeM2-18	0.853	0.337	0.025	(0.0010)	0.26	0.098	0.182	4.23	(0.014)	0.28	4.92	0.0148	(0.0016)	1.90	5.81
M-2		1	SRM 1157	0.836	0.34	0.011	0.004	0.18	0.088	0.228	4.36	.	0.028	4.86	.	.	1.82	6.28
M-4		1	IARM 251A	1.398	0.33	0.014	0.058	0.58	0.13	0.131	4.1	0.01	0.129	5.16	0.044	0.003	3.9	5.5
M-4		1	IARM FEM4-18	1.42	0.298	0.013	0.062	0.60	0.104	0.127	4.16	.	0.080	5.07	0.042	0.0018	3.97	5.55
M-7		2	CT M7	1.00	0.29	0.012	0.003	0.34	0.066	0.10	3.60	.	0.015	8.49	.	.	2.02	1.78
M-10		2	CT M10	0.88	0.27	0.016	0.004	0.30	0.061	0.14	3.97	.	0.012	7.89	.	.	1.99	0.008
M-10		1	IARM 324A	0.99	1.01	0.009	0.028	0.163	0.22	0.081	0.42	0.002	0.007	0.022	0.0082	0.0016	0.0017	(0.003)
M-35		1	IARM 320A	0.93	0.33	0.021	(0.0015)	0.36	0.091	0.204	4.22	0.023	4.90	4.79	(0.014)	0.0032	1.76	6.01
M-42		1	SS 487/1	1.02	0.26	0.022	0.029	0.18	.	(0.14)	3.91	0.006	7.95	9.41	.	.	1.14	1.80
M-47	17025, 34	1	BS M-47	1.14	0.20	0.020	0.002	0.464	0.080	0.17	3.72	(0.002)	4.99	9.24	0.0219	(0.004)	1.23	1.36
M-50	17025, 34	1	BS M-50	0.834	0.244	0.0066	0.0009	(0.205)	0.064	0.074	4.28	0.073	0.0151	4.29	0.0057	(0.0018)	0.99	0.0052
M-50		1	IARM 306B	0.84	0.24	0.006	(0.001)	0.21	0.058	0.095	4.12	0.08	0.010	4.2	0.0049	(0.002)	0.98	(0.01)
M-62		1	IARM FeM62-18	1.32	0.27	0.016	0.015	0.37	0.115	0.129	3.86	(0.006)	0.105	10.2	0.045	(0.003)	2.02	6.31
O-1	17025, 34	2	BS 35D	0.879	1.13	0.021	0.024	0.22	0.141	0.132	0.495	(0.005)	0.012	0.035	.	(0.003)	0.181	0.46
O-1		2	CT O1	0.91	1.27	0.009	0.004	0.36	0.05	0.06	0.49	.	.	0.07	.	.	0.25	0.51
O-2		2	CZ LA-4C	0.95	1.63	0.021	0.012	0.07	0.056	0.045	1.78	0.048	(0.006)	0.008	0.012	(0.002)	(0.010)	0.008
O-6	17025, 34	2	BS 41	1.41	0.89	0.013	0.011	1.02	0.038	0.15	0.22	(0.007)	.	0.23	.	.	0.046	0.035
O-6	25	2	BS 41A	1.50	0.93	0.004	0.001	0.97	0.034	0.17	0.20	0.010	0.006	0.19	0.0077	0.004	(0.003)	(<0.003)
O-6		2	IARM 45A	1.39	0.88	0.014	0.012	1.02	0.049	0.11	0.13	0.011	0.004	0.25	0.0079	0.003	0.005	.
O-6		2	IARM 45B	1.42	0.90	0.010	0.008	0.92	0.018	0.024	0.061	0.010	0.004	0.24	0.0080	0.002	(0.003)	(0.004)
P-20 Al		2	BS 68C	0.38	0.60	0.018	0.008	0.305	0.178	0.166	1.77	1.06	0.011	0.36	0.0045	.	0.007	.
S-1		1	IARM 46B	0.45	0.27	0.019	0.0040	0.89	0.147	0.108	1.09	0.011	0.013	0.222	0.0069	0.007	0.170	1.96
S-1 MOD	17034	1	BS 33F	0.569	0.295	0.0134	0.0009	0.76	0.039	0.211	1.31	0.019	0.017	0.202	0.0124	(0.002)	0.25	2.28
S-1, S-2		2	BS 33D	0.515	0.31	0.016	0.020	0.312	0.040	0.059	1.28	0.008	0.045	0.050	.	.	0.22	2.65
S-1, S-2		2	BS 33E	0.49	0.29	0.022	0.005	0.20	0.038	0.08	1.25	.	0.006	0.045	.	(0.002)	0.19	2.75
S-5		2	BS 38C	0.60	0.81	0.011	0.012	2.08	0.26	0.24	0.28	0.015	0.036	0.41	0.0081	0.007	0.214	0.004
S-5		1	IARM 47B	0.59	0.79	0.017	0.006	1.96	0.17	0.090	0.23	0.014	0.007	0.20	0.0092	0.010	0.17	(0.016)
S-7	17034	1	BS TS-7A	0.527	0.74	0.013	0.016	0.84	0.127	(0.031)	3.35	0.061	(0.005)	1.62	0.0124	(0.003)	0.265	(0.0014)
S-7		1	IARM 259A	0.479	0.399	0.020	0.0007	0.44	0.081	0.194	3.27	0.016	0.011	1.43	0.0077	0.0026	0.256	0.035
S-7		1	IARM FeS7-18	0.51	0.271	0.021	0.0032	0.47	0.128	0.170	3.28	(0.015)	0.0106	1.39	0.0102	0.0014	0.233	(0.016)
S-7		1	SRM 1772	0.477	0.61	0.008	0.0031	0.264	0.083	0.105	3.10	.	.	1.39	.	.	0.236	.
T-1	17025, 34	1	BS 30D	0.745	0.348	0.029	0.0010	0.301	0.116	0.191	3.93	0.0123	0.101	0.342	0.0168	0.0189	1.077	17.73
T-1		1	IARM FeT1-18	0.80	0.295	0.026	(<0.0010)	0.30	0.034	0.14	3.98	0.054	0.096	0.124	0.0195	0.026	1.05	18.0
T-4		1	IARM 281A	0.74	0.30	0.015	0.019	0.29	0.096	0.15	3.89	0.007	4.8	0.49	0.0064	0.004	0.90	17.6
T-15	17034	1	BS TS15	1.64	0.27	(0.017)	0.067	0.357	0.065	(0.18)	4.12	0.0032	4.87	0.48	0.045	0.0016	4.81	11.6
VM12		1	IMZ 196	0.179	0.42	0.018	0.012	0.46	0.080	0.44	11.04	0.029	1.55	0.65	0.058	.	0.34	1.54
W-5		1	14X 72305A	1.085	0.349	0.0128	0.0028	0.206	0.149	0.089	0.425	0.0049	.	0.0231	0.0068	.	0.0045	.

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W

TOOL STEEL ALLOYS, CONTINUED FROM THE PREVIOUS PAGE

Number	As	B	Bi	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units
IARM 341A	(0.003)	0.0005	.	0.0011	.	.	(0.005)	0.0008	(0.001)	(0.001)	(0.005)	.	(0.0002)	(0.003)	Disc 31 mm Ø x 2 or 18 mm
CT X67975	.	.	.	.	.	.	.	.	<0.001	.	0.003	.	.	.	Disc 30-35 mm Ø x ~16 mm
IARM 34C	0.0024	0.0003	(0.00001)	(0.0004)	.	.	0.004	0.0008	(0.0003)	(0.001)	0.0058	.	.	(0.001)	Disc 31 mm Ø x 2 or 18 mm
BS 9-4-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x ~7 or 19+ mm
BS A-10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x ~7 or 19+ mm
BS 10V	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm
BS A-11	0.0057	0.0008	.	(0.0002)	79.5	(0.0005)	(0.0070)	0.028	(0.00006)	(0.001)	0.0055	.	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm
BS 36C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 36D	0.002	.	.	.	.	.	.	.	.	.	0.016	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 36E *	<0.005	<0.005	.	<0.005	91.8	.	0.003	0.001	<0.005	0.003	0.007	0.007	.	0.001	Disc 38 mm Ø x ~7 or 19+ mm
CT A2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
IARM 39B	.	.	.	.	.	.	0.006	.	.	.	0.004	.	.	.	Disc 31 mm Ø x 2 or 18 mm
IARM 39C	(0.005)	0.001	.	(0.001)	.	.	0.0040	0.001	(0.0001)	(0.002)	0.005	.	.	(0.002)	Disc 31 mm Ø x 2 or 18 mm
BS 40B	0.004	0.0006	.	.	.	.	.	.	.	.	0.005	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm
IARM 40B	.	(0.0010)	.	.	.	.	0.005	(0.0014)	.	.	0.004	.	.	.	Disc 31 mm Ø x 2 or 18 mm
IARM 40C	0.008	0.0009	.	(0.001)	.	.	0.003	0.0013	.	.	0.008	.	.	(0.002)	Disc 31 mm Ø x 2 or 18 mm
BS PM15	0.0040	(0.0002)	.	(0.0001)	[73.0]	(0.0002)	0.014	0.0129	(0.00001)	(0.0010)	0.0034	(0.0003)	.	(0.0005)	Disc 38 mm Ø x 19+ mm
IARM Fe15V-18	.	.	.	.	.	.	.	.	.	.	0.0054	.	.	.	Disc 38 mm Ø x 2 or 19 mm
BS 37D	.	.	.	.	.	.	.	0.0031	.	.	0.004	.	.	.	Disc 37 mm Ø x ~7 or 19+ mm
BS 37E	0.002	(0.001)	.	.	.	.	(0.003)	(0.0025)	(0.0005)	(<0.002)	0.003	.	.	.	Disc 41 mm Ø x 19 mm
BS 37G	0.0026	0.0003	.	0.0014	.	.	0.0026	.	0.0005	0.0009	0.0010	.	.	.	Disc 34 mm Ø x 19 mm
BS 37H *	0.003	<0.005	.	<0.005	84.0	<0.005	0.004	0.001	<0.005	0.001	0.004	.	.	0.001	Disc 38 mm Ø x ~7 or 19+ mm
CT D2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
IARM 41D	(0.01)	(0.0006)	.	(0.0008)	.	.	(0.004)	(0.003)	(0.0008)	.	(0.005)	.	.	(0.002)	Disc 31 mm Ø x 2 or 18 mm
BS D-6	0.011	(0.0003)	.	0.0011	.	0.0002	(0.002)	(0.0008)	(0.0003)	0.0012	0.0104	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS D-6A	0.0101	0.0004	.	0.0011	95.6	(0.00014)	<0.01	0.0009	(0.0006)	0.0014	(0.009)	(0.011)	.	<0.01	Disc 38 mm Ø x 19 mm
IARM 299A	0.003	0.0003	.	(0.001)	.	.	0.006	(0.002)	(0.001)	(0.002)	0.0055	.	.	(0.001)	Disc 31 mm Ø x 2 or 18 mm
DSZU C082	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~35 mm Ø x 25 mm
IARM 35L	0.0045	0.00044	.	.	.	.	(0.0026)	.	.	.	0.0088	.	.	.	Disc 31 mm Ø x 2 mm
CT X27081	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
BS 49	.	.	.	.	.	.	.	.	.	.	(0.004)	.	.	.	Disc 49 mm Ø x ~7 or 19+ mm
BS TH11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
ECRM 276-2D	.	.	.	.	.	.	.	.	.	.	0.0133	.	.	.	Disc 38 mm Ø x 25 or 30 mm
IARM 255A	(0.002)	0.0004	.	(0.0004)	.	.	0.004	0.0011	<0.001	.	0.006	.	.	<0.005	Disc 31 mm Ø x 2 mm
IARM 255B	.	.	.	.	.	.	(0.006)	.	.	.	(0.006)	.	.	.	Disc 31 mm Ø x 2 or 18 mm
IMZ 173	.	.	.	.	.	.	.	.	.	.	0.012	.	.	.	Disc 40 mm Ø x 40 mm
BS TH12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x ~7 mm last
BS 34D	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 mm last
BS H-13A	0.0050	(0.0007)	.	(0.0006)	90.2	(0.0002)	0.0052	(0.016)	(0.0004)	(0.002)	(0.005)	.	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm
CT H13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm

Number	As	B	Bi	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units
IARM 42C	(0.01)	0.0011	.	(0.0005)	.	.	(0.004)	0.003	0.0007	(0.004)	(0.006)	(0.004)	(0.008)	(0.002)	Disc 31 mm Ø x 2 or 18 mm
IMZ 174	.	.	.	.	.	.	.	.	.	.	0.010	.	.	.	Disc 40 mm Ø x 40 mm
BS H-19	0.0056	.	.	.	.	.	0.008	0.0071	.	.	0.0056	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 43A	(0.005)	(0.0002)	.	(0.0006)	[96.8]	(0.0001)	(0.0017)	(0.003)	.	(0.002)	0.011	.	.	(0.001)	Disc 41 mm Ø x ~7 or 19+ mm
BS 39B	.	.	.	.	.	.	.	.	.	.	(0.011)	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm
IARM FeL6-18	0.0033	(0.0008)	.	.	.	.	(0.003)	0.0012	.	.	.	.	.	.	Disc 38 mm Ø x 2 or 19 mm
BS TM1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm
CT M1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
IARM 304A	(0.01)	0.002	.	(0.002)	.	.	0.021	0.002	.	(0.001)	0.006	(0.002)	.	(0.002)	Disc 31 mm Ø x 2 mm
IARM FeM1-18	.	.	.	.	.	.	.	.	.	.	0.0041	(0.0024)	.	0.0013	Disc ~38 mm Ø x ~3 or ~19 mm
BS 32D	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
CT M2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
IARM 44C	(0.01)	(0.002)	.	.	.	.	0.012	(0.003)	(0.002)	(0.004)	0.010	(0.004)	(0.006)	(0.002)	Disc 31 mm Ø x 2 mm
IARM FeM2-18	(0.008)	.	.	.	81.4	.	(0.021)	(0.0016)	.	.	(0.007)	.	.	.	Disc 31 mm Ø x 2 or 18 mm
SRM 1157	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø X 19 mm
IARM 251A	0.016	(0.002)	.	(0.0005)	.	.	0.016	(0.01)	(0.002)	.	0.011	.	.	(0.002)	Disc 31 mm Ø x 2 mm
IARM FEM4-18	0.0058	.	.	.	79.0	.	.	.	.	.	0.0050	.	.	.	Disc ~38 mm Ø x ~3 or ~19 mm
CT M7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
CT M10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
IARM 324A	0.006	0.0004	.	0.0009	.	.	0.014	0.003	.	(0.002)	0.011	.	.	(0.001)	Disc 31 mm Ø x 2 mm
IARM 320A	0.013	0.0011	.	.	.	.	(0.015)	(0.0021)	.	.	0.008	.	.	(0.003)	Disc 31 mm Ø x 2 or 18 mm
SS 487/1	(0.012)	.	.	.	.	.	.	.	.	.	(0.006)	.	.	.	Disc 38 mm Ø x 19 mm
BS M-47	0.006	.	.	(0.002)	.	.	(0.004)	0.0037	.	.	0.006	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS M-50	0.0035	(0.0001)	.	(0.001)	88.8	(0.0002)	0.0008	0.0010	(0.0001)	(0.0006)	0.0045	(0.00001)	.	(0.0006)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 306B	(0.003)	(0.001)	.	.	.	.	0.007	(0.001)	(0.001)	0.0025	0.004	.	.	(0.002)	Disc 31 mm Ø x 2 or 18 mm
IARM FeM62-18	.	(0.003)	.	.	.	.	(0.017)	(0.003)	.	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm
BS 35D	.	.	.	.	.	.	(0.001)	.	.	.	0.006	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
CT O1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~19 mm
CZ LA-4C	(0.003)	0.0005	.	.	.	.	0.053	.	.	.	(0.006)	.	.	.	Disc ~37 mm Ø x 25 mm
BS 41	.	.	.	.	.	.	.	.	.	.	(0.008)	.	.	.	Disc 42 mm Ø x ~7 or 19+ mm
BS 41A	0.002	.	.	0.0006	.	.	.	0.002	.	.	0.002	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
IARM 45A	(0.003)	(0.0001)	.	.	.	.	0.002	(0.0017)	(<0.005)	.	0.005	.	.	.	Disc 31 mm Ø x 2 mm
IARM 45B	(0.002)	(0.0001)	.	(0.001)	.	.	(0.002)	(0.0005)	.	(0.001)	0.008	.	.	(0.001)	Disc 31 mm Ø x 2 or 18 mm
BS 68C	(0.004)	.	.	(0.0002)	.	.	.	(0.001)	.	.	0.008	.	.	.	Disc 37 mm Ø x ~7 or 19+ mm
IARM 46B	(0.01)	0.0003	.	.	.	.	0.003	0.002	<0.002	.	0.016	.	.	.	Disc 31 mm Ø x 2 or 18 mm
BS 33F	(0.003)	(0.0007)	.	.	94.0	.	(0.002)	0.0024	(0.0004)	(0.01)	(0.004)	.	.	(0.002)	Disc 38 mm Ø x ~7 - 19+ mm
BS 33D	.	.	.	.	.	.	.	.	.	.	0.005	.	.	.	Disc 41 mm Ø x 12+ mm
BS 33E	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 12+ mm
BS 38C	0.011	.	.	.	.	.	(0.002)	.	0.022	.	0.022	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
IARM 47B	.	(<0.001)	.	.	.	.	(0.002)	(0.0014)	(0.0003)	.	0.08	.	.	.	Disc 31 mm Ø x 2 or 18 mm
BS TS-7A	(0.005)	0.0021	.	0.0004	92.3	<0.005	<0.01	(0.005)	<0.001	<0.01	(0.004)	<0.05	.	(0.0015)	Disc 36 mm Ø x 25 mm
IARM 259A	0.006	0.0003	.	.	.	.	0.003	0.0014	<0.0005	.	0.004	.	.	0.001	Disc 31 mm Ø x 2 mm
IARM FeS7-18	(0.005)	.	.	.	(93.6)	.	(0.005)	0.0023	0.0003	(0.0016)	(0.006)	.	(0.0011)	.	Disc 31 mm Ø x 2 or 18 mm
SRM 1772	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 34 mm Ø x 19 mm
BS 30D	0.0128	(0.0002)	.	0.0004	[75.0]	(0.001)	0.0071	0.0019	(0.0002)	0.0032	0.0246	(0.02)	.	(0.0001)	Disc 38 mm Ø x ~7 or 19+ mm
IARM FeT1-18	.	.	.	.	.	.	(0.004)	(0.0027)	.	.	(0.010)	.	.	.	Disc 31 mm Ø x ~2 or 18 mm
IARM 281A	(0.02)	(0.003)	.	.	.	(0.003)	0.094	(0.003)	.	.	0.02	.	.	(0.002)	Disc 31 mm Ø x 2 or 18 mm
BS TS15	(0.006)	(0.0005)	.	(0.001)	71.4	(0.002)	0.009	(0.018)	.	.	0.0074	.	.	(0.003)	Disc 38 mm Ø x ~7 or 19+ mm
IMZ 196	.	0.065	.	.	.	.	0.073	.	.	.	.	.	.	.	Disc 37 mm Ø x 30 mm
14X 72305A	.	.	.	.	.	.	.	.	.	.	0.0101	.	.	.	Disc ~40 mm Ø x ~15 mm

Number	As	B	Bi	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units

MANGANESE STAINLESS STEEL ALLOYS

1 = CRM, 2 = RM, 3 = RM with no uncertainties

Alloy	ISO	#	Number	Mn	C	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
12Mn18Cr		2	BS 193	12.11	0.104	0.018	0.002	0.66	0.088	1.82	18.48	(0.003)	0.028	0.21	0.37	0.003	0.107	(0.007)
18Cr2Ni12Mn		2	CT ISO035A	12.04	0.102	0.023	0.002	0.59	0.17	1.81	18.48	<0.004	0.037	0.28	0.33	0.001	0.058	0.002
201		2	BS 191	5.71	0.098	0.024	0.023	3.73	0.33	5.34	16.33	(0.002)	0.11	0.36	0.117	0.012	0.083	0.033
201		1	SRM 1297	7.11	0.066	0.038	0.0033	0.397	0.442	5.34	16.69	.	0.127	0.331	.	.	0.080	.
2101		1	IARM 292A	5.0	0.030	0.018	0.001	0.75	0.29	1.47	21.35	0.010	0.031	0.097	0.245	0.005	0.084	0.01
21Cr6Ni9Mn		2	CT ISO129A	9.31	0.030	0.002	<0.001	0.40	0.152	6.86	19.62	0.014	0.102	0.25	0.264	.	0.144	0.03
LDX2101		1	13X 32101A	4.91	0.0325	0.0194	(0.0004)	0.777	0.295	1.476	21.12	0.0122	0.0347	0.0970	0.241	.	0.0830	.
Nitronic 40		1	13X NSC6	8.85	0.0266	0.0049	0.0055	0.523	0.0064	6.52	20.47	(0.009)	.	(0.002)	0.235	.	0.0052	.
Nitronic 40		2	BS 190	9.72	0.022	0.015	0.001	0.46	0.072	6.74	19.57	(0.004)	0.044	0.15	0.255	0.002	0.11	0.015
Nitronic 40		1	IARM FeN40-18	9.13	0.019	0.025	0.0012	0.31	0.421	6.42	19.45	.	0.122	0.343	0.348	.	0.086	0.030
Nitronic 50	LAST	2	BS 180A	5.05	0.018	0.012	0.001	0.32	0.067	13.19	21.09	0.012	0.039	2.04	0.334	(0.002)	0.20	0.02
Nitronic 50	17034	1	BS 180B	4.65	0.022	0.017	0.0008	0.46	0.201	11.9	21.5	(0.007)	0.111	2.20	0.315	(0.005)	0.149	0.050
Nitronic 50		1	IARM 17D	4.15	0.041	0.026	0.0018	0.416	0.412	11.83	21.06	0.0032	0.23	1.52	0.311	0.010	0.118	0.056
Nitronic 50		1	IARM FeN50-18	5.27	0.030	0.026	(0.0013)	0.24	0.28	11.90	21.0	(0.006)	0.081	2.01	0.26	(0.002)	0.121	0.023
Nitronic 60	17025, 34	1	BS 181B	8.07	0.070	0.021	0.0009	3.94	0.206	8.18	16.17	0.0119	0.044	0.173	0.158	0.0051	0.044	0.016
Nitronic 60		1	IARM 18D	8.1	0.069	0.032	0.0025	3.68	0.421	8.39	16.7	(0.006)	0.086	0.325	0.170	0.012	0.064	(0.026)
NMS 100		1	IARM 214A	18.3	0.018	0.033	0.002	1.00	0.36	2.33	12.36	(0.002)	0.021	0.44	0.27	0.002	0.04	0.02
NMS 140		1	IARM 295A	19.7	0.021	0.028	0.0041	0.36	0.113	1.84	18.0	(0.01)	0.021	0.97	0.62	0.0019	0.046	0.016

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zn	Zr	Units
BS 193	.	0.0007	0.0020	.	.	0.014	(0.004)	.	.	.	0.004	.	.	.	Disc 32 mm Ø x ~7 or 19+ mm
CT ISO035A	.	.	.	65.91	.	0.004	.	(<0.0001)	.	.	0.003	.	.	<0.001	Disc 30-35 mm Ø x ~19 mm
BS 191	.	(0.0006)	.	.	.	0.024	0.002	.	.	.	(0.006)	0.002	.	.	Disc 38 mm Ø x ~7 or 19+ mm
SRM 1297	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
IARM 292A	.	0.0011	.	.	.	0.009	0.0024	.	.	.	0.004	(0.006)	.	.	Disc 31 mm Ø x 2 mm
CT ISO129A	.	.	.	62.62	.	0.025	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
13X 32101A	.	0.0014	.	.	.	0.0070	.	.	.	.	0.0035	(0.115)	.	.	Disc ~38 mm Ø x ~15 mm
13X NSC6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 13 mm
BS 190	.	0.0005	.	.	.	(0.004)	0.0045	.	.	.	0.003	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
IARM FeN40-18	.	.	.	.	.	0.032	.	.	.	.	0.0081	.	.	.	Disc ~38 mm Ø x ~3 or ~19 mm
BS 180A	.	(0.0023)	.	.	.	0.20	0.003	.	.	.	(0.002)	.	.	.	Disc 37 mm Ø x ~7 mm
BS 180B	(0.004)	0.0011	0.0009	58.5	(0.0007)	0.131	0.0043	(0.002)	(0.0007)	.	0.0040	(0.003)	.	(0.0009)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 17D	0.005	0.001	(0.002)	.	(0.0003)	0.14	0.003	(0.0002)	(0.001)	(0.001)	0.0044	(0.003)	(0.0004)	(0.002)	Disc 31 mm Ø x 2 mm
IARM FeN50-18	.	.	.	.	.	0.18	(0.006)	.	.	.	(0.007)	.	.	.	Disc 31 mm Ø x 2 or 18 mm
BS 181B	(0.002)	(0.0008)	(0.001)	62.9	(0.0003)	0.026	0.0010	(0.0005)	(0.0007)	.	(0.004)	.	.	(0.0004)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 18D	.	(0.0011)	.	.	.	(0.031)	.	.	.	.	(0.007)	.	.	.	Disc 31 mm Ø x 2 mm
IARM 214A	.	(0.001)	.	.	.	0.23	0.0026	.	.	.	0.008	.	.	.	Disc 31 mm Ø x 2 mm
IARM 295A	.	0.002	.	.	.	0.018	(0.003)	.	.	.	0.004	.	.	(0.001)	Disc 31 mm Ø x 2 or 18 mm

RESULFURIZED STAINLESS STEEL ALLOYS

Alloy	ISO	#	Number	S	C	Mn	P	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
182 FM		2	BS 150	0.33	0.048	1.71	0.020	0.43	0.042	0.19	18.61	0.002	0.024	1.97	0.029	.	0.054	0.01
303		1	13X 30300A	0.312	0.041	1.83	0.0205	0.422	0.025	8.60	17.62	.	0.0255	0.334	0.034	.	0.091	.
303	17025, 34	1	BS 303	0.326	0.044	1.80	0.028	0.415	0.627	8.17	17.23	0.0019	0.071	0.410	0.023	0.017	0.056	0.023
303		2	CT 303	0.31	0.070	1.64	0.029	0.58	0.49	9.08	17.78	.	0.16	0.41	.	.	0.044	.
303		3	CZ SP-1A	0.26	0.047	1.87	0.024	0.33	0.52	8.6	17.7	0.004	0.095	0.42	.	0.02	0.058	0.03
303		1	IARM Fe303-18	0.35	0.046	1.55	0.033	0.47	0.61	8.12	17.2	.	0.140	0.42	0.069	.	0.072	0.029
416	17025, 34	1	BS 416	0.35	0.116	0.64	0.0237	0.232	0.154	0.371	13.41	(0.002)	0.0241	0.030	0.043	0.0012	0.100	0.0034
416	LAST	2	BS 90F	0.328	0.085	0.53	0.023	0.58	0.12	0.30	13.01	(0.006)	0.021	0.14	0.037	.	0.076	0.032
416		2	CT 416	0.36	0.088	0.52	0.018	0.63	0.004	0.24	13.15	.	0.019	0.065	0.020	.	0.025	.
416		1	SRM 1223	0.329	0.127	1.08	0.018	0.327	0.081	0.232	12.64	.	.	0.053	.	.	0.068	.
416 H		1	13X 41600A	0.302	0.111	0.627	0.0253	0.442	0.160	0.331	13.23	(0.004)	0.0216	0.0499	0.0245	.	0.0888	(0.003)
420 F		2	BS 152	0.275	0.320	0.36	0.022	0.44	0.050	0.14	13.41	(0.002)	0.015	0.061	0.020	.	0.051	<0.01
420 F S		1	IARM 352A	0.21	0.341	1.13	0.0182	0.357	0.148	0.269	13.11	(0.0025)	(0.016)	0.38	0.029	0.0015	0.028	(0.005)
430 F		2	BS 153	0.280	0.026	0.41	0.018	0.53	0.052	0.140	17.38	0.002	0.017	0.30	0.021	(0.004)	0.045	(0.002)
430 F		2	BS 154	0.302	0.030	0.40	0.027	1.26	0.063	0.25	17.58	(0.002)	0.019	0.31	0.039	.	0.046	(0.01)
430 F S		1	IARM 355A	0.31	0.0274	0.47	0.0186	0.435	0.083	0.427	17.81	0.0016	0.047	0.337	0.0439	0.0020	0.038	(0.018)
440 F		2	BS 155	0.145	1.00	0.35	0.014	0.40	0.035	0.13	16.64	(0.001)	0.019	0.46	0.032	.	0.10	.

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zn	Zr	Units
BS 150	.	.	.	.	.	0.003	0.012	.	.	.	(0.003)	.	.	.	Disc 35 mm Ø x ~7 or 19+ mm
13X 30300A	.	0.0035	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
BS 303	.	0.0013	(0.0015)	[70.7]	.	0.008	0.0058	.	(0.002)	.	0.0091	.	.	.	Disc 44 mm Ø x ~7 or 19+ mm
CT 303	.	.	.	.	.	.	.	0.001	.	.	0.007	.	.	.	Disc 30-35 mm Ø x ~16 mm
CZ SP-1A	0.006	0.0007	.	.	.	0.012	.	.	.	.	0.01	.	.	.	Disc ~39 mm Ø x 25 mm
IARM Fe303-18	0.007	(0.0012)	.	.	.	0.015	(0.006)	.	.	.	(0.015)	.	.	.	Disc 31 mm Ø x 2 or 18 mm
BS 416	0.0039	(0.001)	(0.0003)	[84.3]	(0.0003)	(0.006)	0.0081	(0.0006)	(0.002)	.	(0.005)	(0.004)	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm
BS 90F	.	.	.	.	.	0.011	0.011	.	.	.	0.005	.	.	.	Disc 38 mm Ø x ~7 to 19 mm
CT 416	.	.	.	.	.	.	.	<0.001	.	.	0.005	.	.	.	Disc 30-35 mm Ø x ~16 mm
SRM 1223	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
13X 41600A	.	.	.	.	.	0.0053	.	.	.	.	0.0066	.	.	.	Disc ~41 mm Ø x ~15 mm
BS 152	.	.	.	.	.	0.006	.	.	.	.	0.003	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm
IARM 352A	(0.005)	(0.0007)	.	.	.	(0.012)	(0.005)	.	.	(0.006)	0.0046	(0.0007)	.	.	Disc 31 mm Ø x 2 or 18 mm
BS 153	(0.004)	.	.	.	.	0.002	.	(0.001)	.	.	0.002	.	.	.	Disc 35 mm Ø x ~7 or 19+ mm
BS 154	.	.	.	.	.	0.005	0.008	.	.	.	(0.005)	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
IARM 355A	(0.004)	(0.0011)	.	.	(0.0008)	0.0095	(0.010)	(0.0002)	.	(0.0001)	(0.005)	(0.001)	(0.0007)	(0.002)	Disc 31 mm Ø x 2 or 18 mm
BS 155	.	.	.	.	.	0.002	0.0048	.	.	.	(0.003)	.	.	.	Disc 36 mm Ø x ~7 or 19+ mm

MARAGING STEEL ALLOYS

1 = CRM, 2 = RM, 3 = RM with no uncertainties

Alloy	ISO	#	Number	Co	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Mo	N	Ti	V	W
A-538C	25, LAST	1	BS 161A	9.22	0.004	0.031	0.004	0.0007	0.032	0.22	18.40	0.12	0.14	4.82	(0.002)	0.65	0.031	(0.008)
C-350		1	IARM 309A	12.3	0.0059	0.018	0.004	0.0006	0.020	0.023	18.4	0.053	0.11	4.71	0.0010	1.47	0.01	0.01
250	17034	1	BS M250	7.9	0.0021	0.024	0.0031	(0.0005)	(0.003)	(0.003)	18.7	(0.004)	0.098	4.93	<0.005	0.422	<0.05	(0.007)
250		2	CT 250	7.54	0.002	0.006	0.003	0.002	0.008	0.008	18.44	0.008	0.058	4.88	.	0.41	.	.
250		1	ECRM 285-2D	7.76	0.0018	0.0168	0.0053	0.0025	0.0117	0.0094	18.07	0.0236	0.1067	4.99	0.0007	0.520	.	.
250		1	IARM 308A	7.80	0.003	0.019	0.004	0.0005	0.014	0.018	18.53	0.023	0.097	4.78	0.0013	0.46	0.01	0.01
250		1	IARM FeC250-21	7.92	0.0028	0.022	0.0033	0.0006	0.0091	(0.0041)	18.6	(0.0093)	0.101	4.93	0.0004	0.418	(0.0074)	(0.0069)
300	17034	1	BS 161B	9.28	0.0031	0.010	(0.004)	0.0007	0.0107	0.010	18.56	0.034	0.073	4.87	0.0011	0.67	0.0011	0.010
300		2	CT 300	9.07	0.005	0.032	0.005	0.004	0.030	0.047	18.51	0.034	0.12	4.97	.	0.69	.	.
300		1	IARM 99D	9.24	(0.006)	(0.013)	(0.004)	0.0011	(0.03)	(0.045)	18.4	(0.12)	0.117	4.8	(0.0014)	0.67	(0.037)	(0.010)

Number	As	B	Ca	Fe	H	Mg	Nb	O	Sb	Sn	Ta	Zr	Units
BS 161A	(0.002)	0.0023	(0.0008)	.	.	.	(0.004)	(0.0004)	.	(0.0015)	(0.03)	(0.002)	Disc 38 mm Ø x ~12 or 19 mm
IARM 309A	(0.004)	0.0032	<0.001	.	.	.	0.004	0.0005	.	(0.001)	(0.006)	0.008	Disc 31 mm Ø x 2 mm
BS M250	.	0.0029	(0.003)	67.8	<0.0005	<0.005	<0.005	0.0005	<0.0005	<0.005	<0.005	0.0048	Disc 38 mm Ø x ~7 or 19+ mm
CT 250	.	0.0024	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~19 mm
ECRM 285-2D	.	0.0009	.	.	.	.	.	.	.	.	.	0.0050	Disc 38 mm Ø x 25 or 30 mm
IARM 308A	.	0.0029	.	.	.	.	0.003	0.0005	.	0.001	<0.01	0.01	Disc 31 mm Ø x 2 mm
IARM FeC250-21	(0.0011)	0.0029	.	.	.	.	0.0019	0.0006	(0.0044)	(0.0015)	(0.0128)	(0.0031)	Disc 38 mm Ø x 3 or 19 mm
BS 161B	.	0.0027	.	66.6	.	.	(0.0034)	0.0005	.	(0.0011)	(0.017)	(0.005)	Disc 41 mm Ø x ~7 or 19+ mm
CT 300	.	0.0020	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
IARM 99D	.	0.0026	.	.	.	.	(0.011)	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm

STAINLESS STEEL ALLOYS, CONTINUED ON THE NEXT PAGE

1 = CRM, 2 = RM, 3 = RM with no uncertainties

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
13-8PH		1	13X PH13800A	0.0386	0.0332	0.0064	0.0030	0.081	0.0449	8.04	12.53	1.075	0.0220	2.10	0.0041	0.0122	0.0188	.
13-8PH		2	BS 184A	0.035	0.06	0.007	0.001	0.080	0.041	8.34	12.66	1.00	0.036	2.20	0.0045	0.051	0.014	0.032
13-8PH		1	IARM 21D	0.032	0.052	0.008	(0.0014)	0.039	0.017	8.29	12.69	1.03	0.078	2.23	0.0037	0.016	0.017	(0.012)
15-5PH		2	BS 185A	0.033	0.49	0.022	0.002	0.38	3.41	4.43	14.46	0.002	0.026	0.30	0.027	(0.001)	0.048	(0.014)
15-5PH		2	BS 9621	0.035	0.31	0.017	0.0011	0.468	3.42	4.61	14.93	0.003	0.029	0.063	0.013	(0.001)	0.096	(0.01)
15-5PH		2	BS 9622	0.032	0.63	0.019	0.004	0.42	3.34	4.34	14.34	0.002	0.040	0.27	0.028	(0.001)	0.074	(0.020)
15-5PH		1	ECRM 273-1D	0.0336	0.785	0.0131	0.0004	0.378	3.046	4.85	14.747	.	0.0391	0.2462	0.0444	.	0.0512	.
15-5PH		1	IARM Fe155PH-18	0.015	0.616	0.021	(0.0004)	0.430	3.35	4.79	15.13	0.014	0.024	0.129	0.0494	.	0.055	0.019
16-6-2-2	XRF is LAST	1	IARM 318B	0.050	1.02	0.022	0.0006	0.41	1.63	5.71	15.9	(0.004)	0.100	1.57	0.032	0.014	0.115	0.087
17-4PH		1	13X PH2M	0.0598	1.184	0.0201	0.0419	0.502	4.03	3.56	16.80	0.0419	0.0927	1.009	0.052	0.049	0.1028	.
17-4PH	LAST	2	BS 17-4PHA	0.018	0.85	0.023	0.022	0.40	3.30	4.69	15.40	.	0.072	0.34	0.022	.	0.043	.
17-4PH	17034	1	BS 17-4PHC	0.033	0.81	0.022	0.027	0.399	3.23	4.24	15.40	0.0023	0.077	0.45	0.027	(0.001)	0.090	0.121
17-4PH		1	IARM Fe174PH-18	0.041	0.47	0.024	(<0.0040)	0.52	3.33	4.73	15.10	0.007	0.047	0.315	0.0436	.	0.051	0.015
17-4PH		1	SRM C2400	0.036	0.71	0.013	0.003	0.61	2.63	4.07	17.06	.	0.10	0.23	.	.	0.092	.
17-7PH		1	13X PH17700A	0.0732	0.496	0.0181	0.0008	0.551	0.146	6.98	16.88	1.172	0.0464	0.340	0.0192	0.051	0.0390	0.009
17-7PH	25	1	BS 192	0.074	0.835	0.025	0.0005	0.387	0.412	7.11	16.44	1.17	0.104	0.430	0.0290	0.076	0.124	0.05
17-7PH	25	1	BS 192A	0.066	0.768	0.021	<0.002	0.300	0.334	7.01	16.44	0.98	0.114	0.28	0.029	0.083	0.077	0.048
17-7PH		1	IARM Fe177PH-18	0.080	0.730	0.020	(0.0005)	0.51	0.36	7.11	17.08	1.09	0.048	0.350	0.0153	0.083	0.062	(0.011)
253 MA	25	2	BS 253	0.094	0.58	0.018	<0.001	1.81	0.14	10.89	20.68	0.016	0.15	0.21	0.146	0.005	0.050	0.03
253 MA		1	IARM 316A	0.070	0.61	0.023	0.0011	1.50	0.19	10.81	21.07	0.006	0.118	0.250	0.16	(0.002)	0.042	0.022
255, 2507	LAST	1	BS 179A	0.017	1.04	0.021	0.001	0.44	1.94	5.84	25.45	(0.009)	0.58	3.24	0.184	0.006	0.070	(0.2)
255, 2507	17025, 34	1	BS 179B	0.0161	0.890	0.0243	0.0002	0.371	1.56	6.17	25.9	0.0070	0.0394	3.34	0.239	(0.0008)	0.079	0.053
255, 2507	17025, 34	1	BS 179C	0.0164	0.878	0.0236	0.0003	0.373	1.53	6.10	25.9	0.0078	0.0386	3.34	0.236	(0.0005)	0.080	0.056
255, 2507	17034	1	BS 2507	0.026	0.79	0.023	(0.0005)	0.32	0.222	6.94	25.3	(0.004)	0.040	3.75	0.273	0.0028	0.064	0.074
255, 2507		1	IARM 239C	0.017	0.87	0.023	(0.0010)	0.38	1.49	6.14	25.8	0.007	0.039	3.33	0.228	(0.004)	0.083	(0.05)
255, 2507		1	IARM 239B	0.013	0.86	0.025	0.0005	0.39	1.48	5.78	25.9	0.008	0.048	3.42	0.25	0.002	0.099	0.106
255, 2507		1	IARM Fe2507-21	0.019	0.85	0.024	0.0005	0.36	0.125	7.12	25.2	(0.0051)	0.039	3.76	0.27	0.0019	0.067	0.026
301		1	IARM 289A	0.126	1.67	0.006	0.0019	0.58	0.016	7.12	17.0	0.01	0.054	(0.005)	0.0032	0.028	0.01	0.01
301		1	IRSID 1819	0.112	0.903	0.023	0.0112	0.616	0.064	7.10	17.31	.	0.117	0.110	0.0288	.	.	.
302		1	IARM 241D	0.125	1.94	(0.003)	0.0023	1.00	0.242	8.98	18.12	0.022	0.022	(0.02)	(0.008)	0.018	0.031	(0.012)
302 HQ		1	IARM 234C	0.092	1.93	0.0090	(0.0027)	0.88	3.41	9.00	18.15	0.035	0.034	0.012	(0.01)	0.026	0.055	(0.006)
303 Se		1	IARM 253A	0.041	1.50	0.140	0.0089	0.50	0.223	9.17	17.90	0.003	0.088	0.348	0.0373	0.002	0.106	0.10
303 Se		1	IARM 253B	0.051	1.61	0.13	0.011	0.46	0.44	9.11	17.64	(0.004)	0.145	0.59	0.031	0.0027	0.092	(0.05)
304		1	ECRM 292-1D	0.0367	1.744	0.0175	0.0055	0.402	0.0391	10.09	18.00	(0.002)	0.0255	0.0464	0.0640	.	.	.
304 H		2	13X NSB1D	0.17	0.44	.	.	0.58	.	10.0	19.1	.	.	0.11	0.04	.	.	.
304 H		2	CT 304	0.063	0.78	0.026	0.023	0.56	0.34	9.60	18.57	.	0.20	0.33	.	.	0.037	.
304 H		1	IARM Fe304H-18	0.052	1.82	0.031	0.027	0.298	0.460	8.35	18.4	(0.005)	0.136	0.43	0.072	.	0.075	0.027
304 H		1	SS 468/1	0.143	1.70	0.014	0.020	1.41	.	8.90	17.96	.	0.018	.	.	.	.	.
304 H + Ca	17034	1	BS CA304-4	0.096	0.783	0.0205	0.0070	0.887	0.143	8.77	18.26	0.017	(0.007)	0.0041	0.061	0.0046	0.0686	0.0056
304 L		1	13X 30403B	0.0277	1.820	0.0321	0.0266	0.288	0.497	8.13	18.30	0.0056	0.178	0.313	0.083	0.0013	0.0700	0.035
304 L	17034	1	BS 304C	0.024	1.37	0.034	0.027	0.302	0.524	8.53	18.2	0.0022	0.229	0.419	0.077	(0.0024)	0.083	0.043
304 L		1	ECRM 287-1D	0.016	1.48	0.027	0.0014	0.569	0.203	10.35	18.61	.	0.148	0.247	0.019	.	.	.

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
304 L	last	1	IARM 162D	0.0240	1.82	0.0296	0.0271	0.570	0.52	8.15	18.31	(0.0026)	0.074	0.573	0.097	0.013	0.063	0.028
304 L		1	IARM Fe304L-22	0.013	1.46	0.031	0.0324	0.287	0.443	8.65	18.21	0.0020	0.331	0.362	0.083	0.0021	0.081	0.066
304 L		2	PV 111/1	0.0226	1.538	0.019	0.026	0.485	0.105	8.57	18.49	.	.	0.173	.	.	.	.
304 L		1	SS 463/1	0.019	1.400	0.025	0.019	0.270	0.276	10.20	18.46	.	0.116	0.265	0.063	.	.	.
304 L		2	TL 2003D	0.0193	1.068	0.0274	0.0169	0.5020	0.2773	9.231	18.25	.	0.1270	0.2871	0.0556	.	0.0711	0.0150
305		1	ECRM 297-1D	0.0223	0.897	0.0137	0.0101	0.344	0.204	12.33	18.37	0.0195	0.0413	0.290	0.0152	0.0072	0.0535	(0.0057)
306		1	13X 30600A	0.0090	0.648	0.0091	0.0007	4.23	0.0121	14.96	17.43	0.020	0.0149	0.0040	0.027	.	0.0206	.
308		1	DSZU C017	0.053	2.03	0.040	0.0298	0.61	0.36	10.85	19.21	0.28	.	2.36	0.018	0.32	0.084	0.20
309		2	BS 82E	0.062	1.61	0.027	0.001	0.58	0.26	12.49	22.38	0.006	0.12	0.31	0.072	0.003	0.064	0.041
309		1	IARM Fe309-18	0.066	1.61	0.029	(0.002)	0.30	0.430	12.2	22.42	.	0.248	0.357	.	.	0.073	0.063
309, 309 H	17034	1	BS 309	0.062	1.61	0.028	0.0011	0.24	0.349	12.16	22.40	(0.0025)	0.200	0.193	0.073	0.0020	0.075	(0.031)
310		1	13X 31008A	0.062	1.232	0.030	0.0040	0.510	0.157	19.35	24.45	.	0.078	0.337	0.063	.	0.079	0.166
310		2	BS 83G	0.073	1.66	0.024	0.004	0.56	0.114	19.15	24.50	(0.004)	0.153	0.085	0.026	(0.003)	0.077	0.007
310	25	1	BS 9841	0.067	1.69	0.024	0.024	0.54	0.356	19.55	24.30	(<0.006)	0.116	0.57	0.064	(0.002)	0.070	0.06
310	25	1	BS 9842	0.059	1.50	0.025	0.0016	0.99	0.147	20.02	24.19	0.014	0.237	0.111	0.037	0.003	0.075	0.011
310		3	CZ SL-3A	0.043	1.73	0.024	0.002	0.53	0.22	19.6	24.6	0.007	0.06	0.38	0.065	0.003	0.066	0.03
310		1	IARM 4E	0.044	1.07	0.0224	0.0006	0.514	0.234	20.18	24.25	0.004	0.066	0.32	0.038	(0.003)	0.052	0.046
310		1	IARM 4F	0.047	1.17	0.0195	0.0015	0.494	0.146	20.1	24.5	0.015	0.067	0.142	0.056	0.0031	0.146	0.012
310		1	IARM 4G	0.0454	1.36	0.027	0.0008	0.630	0.320	19.2	24.9	0.008	0.085	0.580	0.058	0.029	0.092	0.017
310		1	SS 464/1	0.086	0.791	0.020	0.028	0.57	.	20.05	25.39	.	0.054	.	.	.	.	.
314		1	IMZ 165	0.082	0.98	0.017	0.007	1.42	0.040	19.01	23.28	0.038	0.029	0.025	0.105	(0.002)	0.042	.
314		1	IMZ 166A	0.108	1.99	0.019	0.005	2.51	0.025	21.93	25.53	0.036	0.030	(0.025)	0.077	0.003	0.038	.
316 H		2	CT 316	0.061	1.64	0.029	0.023	0.69	0.25	12.61	17.60	.	0.14	2.45	.	.	0.051	.
316 H		1	IARM 339A	0.16	1.71	0.004	0.009	0.64	0.021	12.9	17.0	0.004	0.007	2.79	0.0060	(0.002)	0.007	(0.0119)
316 H		1	NILAB 500HA D	0.041	1.541	0.024	0.012	0.720	0.182	11.00	16.93	.	0.139	2.73	0.1154	.	0.074	.
316 L	17034	1	BS 316G	0.021	1.61	0.032	0.0213	0.286	0.39	10.54	16.43	(0.003)	0.30	2.11	0.038	0.0018	0.080	0.130
316 L		3	CZ SL-2A	0.015	1.84	0.025	0.027	0.64	0.50	11.0	16.9	0.005	0.09	2.03	0.04	0.06	0.075	0.03
316 L		1	IARM Fe316L-23	0.014	1.37	0.031	0.024	0.226	0.300	10.5	16.77	(0.005)	0.46	2.04	0.039	(0.0017)	0.098	0.103
316 L		1	SRM 1155a	0.0260	1.593	0.0271	(0.0020)	0.521	0.2431	12.471	17.803	<0.01	0.225	2.188	(0.0428)	0.0039	0.0725	0.0809
316 L		1	SS 466/2	0.0141	1.311	0.0105	0.0069	0.480	0.0278	10.20	17.84	0.0018	0.0184	2.776	0.0508	.	0.0346	.
316 LN		1	IMZ 153A	0.037	1.49	0.021	0.0073	0.73	0.102	13.57	16.45	0.036	0.015	2.61	0.107	0.036	0.020	.
316 MOD		2	TL 2002D	0.0149	1.30	0.022	0.0206	0.53	0.438	11.0	16.7	.	0.087	2.05	0.0341	0.0098	0.068	.
316 Ti		2	PV 112/1	0.047	1.577	0.018	0.023	0.515	0.102	11.14	17.56	.	.	2.03	.	0.394	.	.
316 Ti		1	VS LG72	0.072	1.32	.	0.0050	0.334	0.306	12.4	16.36	0.089	0.090	2.07	0.0073	0.57	.	0.077
317 L	17034	1	BS 317L	0.025	1.17	0.029	0.0017	0.67	0.23	13.51	18.2	0.0044	0.14	3.07	0.055	0.0034	0.091	0.017
317 L	25	1	BS 9941	0.021	1.78	0.027	0.024	0.33	0.424	13.68	18.48	0.004	0.178	3.24	0.036	(0.002)	0.062	0.068
317 L	25	1	BS 9942	0.021	1.84	0.025	0.006	0.49	0.305	13.55	18.21	0.004	0.086	3.30	0.071	(0.002)	0.072	0.032
318, 2205	LAST	1	IARM 212D	0.019	1.21	0.024	0.0007	0.34	0.125	5.53	22.60	(0.005)	0.049	3.27	0.182	(0.002)	0.063	0.014
318, 2205		1	IARM Fe2205-18	0.018	1.18	0.023	(0.0013)	0.46	0.208	5.57	22.6	(0.007)	0.104	3.20	0.17	(0.003)	0.063	0.024
318, 2205		1	13X NSA9B	0.030	1.52	0.0237	0.0009	0.290	0.154	5.75	22.39	.	0.033	3.27	0.184	.	0.060	0.033
318, 2205	17034	1	BS 2205A	0.021	1.48	0.029	0.0006	0.53	0.300	5.26	22.73	(0.004)	0.071	3.17	0.157	(0.002)	0.083	(0.02)

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W

STAINLESS STEEL ALLOYS, CONTINUED FROM THE PREVIOUS PAGE

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zr	Units
13X PH13800A	.	.	.	.	.	.	.	.	.	.	0.0051	.	.	Disc ~38 mm Ø x ~15 mm
BS 184A	.	(0.0004)	(0.0003)	.	.	(0.006)	(0.0003)	.	.	.	(0.002)	.	.	Disc 38 mm Ø x ~7 or 19+ mm
IARM 21D	.	.	.	.	.	(0.005)	.	.	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm
BS 185A	.	0.0017	(0.0002)	.	.	0.32	(0.0021)	.	.	.	0.007	(0.002)	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 9621	.	0.0004	(0.0001)	.	.	0.27	.	.	.	.	0.003	(0.002)	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 9622	.	0.0004	.	.	.	0.33	.	.	.	.	0.006	.	.	Disc 38 mm Ø x ~7 or 19+ mm
ECRM 273-1D	0.0030	.	.	.	.	0.221	.	.	.	.	0.0021	.	.	Disc 40 mm Ø x 20 mm
IARM Fe155PH-18	(0.0026)	(0.0005)	.	75.03	.	0.273	0.0028	.	.	.	0.0021	.	.	Disc 31 mm Ø x 2 or 18 mm
IARM 318B	(0.004)	0.0003	.	.	.	0.086	0.009	.	.	.	0.004	(0.004)	(0.003)	Disc 31 mm Ø x 2 mm last
13X PH2M	.	0.0047	.	.	.	0.143	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
BS 17-4PHA	.	0.0016	.	.	.	0.204	.	.	.	.	.	(0.002)	.	Disc 38 mm Ø x ~7 mm
BS 17-4PHC	0.0043	0.0026	0.0007	74.8	.	0.258	0.010	(0.0001)	.	.	0.0100	.	(0.002)	Disc 44 mm Ø x ~7 or 19+ mm
IARM Fe174PH-18	.	.	.	.	.	0.285	0.0035	.	.	.	0.008	.	.	Disc 31 mm Ø x 2 or 18 mm
SRM C2400	.	.	.	.	.	0.15	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
13X PH17700A	.	0.0033	.	.	.	0.0201	.	.	.	.	0.0055	.	.	Disc ~38 mm Ø x ~15 mm
BS 192	(0.005)	(0.0003)	0.0007	.	.	0.168	0.0014	.	.	.	0.008	(0.001)	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 192A	(0.0035)	(0.0003)	(0.0006)	.	.	0.208	(0.0006)	.	.	.	0.008	.	.	Disc 38 mm Ø x ~7 or 19+ mm
IARM Fe177PH-18	.	(0.0017)	.	.	.	0.009	.	.	.	.	(0.006)	.	.	Disc 31 mm Ø x 2 or 18 mm
BS 253	0.005	.	.	Ce: 0.044	.	0.017	.	.	.	.	0.006	.	.	Disc 38 mm Ø x ~7 or 19+ mm
IARM 316A	0.007	(0.0003)	0.0017	Ce: 0.064	.	(0.003)	0.0052	(0.0001)	.	.	0.006	(0.003)	.	Disc 31 mm Ø x 2 mm
BS 179A	(0.003)	(0.001)	.	.	.	0.030	.	.	.	.	0.005	.	.	Disc 31 mm Ø x ~7 mm
BS 179B	0.0036	0.0015	(0.0004)	[61.5]	(0.0004)	0.008	0.0037	(0.00002)	0.0005	.	0.0019	(0.0006)	(0.005)	Disc 38 mm Ø x 19+ mm
BS 179C	0.0034	0.0015	(0.0003)	[61.6]	(0.0004)	0.009	0.0038	(0.00002)	0.0005	.	0.0018	(0.0006)	(0.0042)	Disc 38 mm Ø x ~7 or 19+ mm
BS 2507	0.0046	0.0021	(0.0003)	62.3	(0.0002)	(0.011)	0.0038	(0.0002)	0.0008	.	0.0050	.	<0.01	Disc 38 mm Ø x ~7 or 19+ mm
IARM 239C	(0.004)	0.0014	.	.	.	(0.006)	(0.007)	(0.004)	(0.0004)	.	(0.003)	(0.004)	(0.003)	Disc 31 mm Ø x 2 or 18 mm
IARM 239B	.	0.0008	.	.	.	0.024	(0.004)	.	.	.	(0.003)	.	(0.002)	Disc 31 mm Ø x 2 mm
IARM Fe2507-21	0.004	0.0024	.	Rem	.	0.022	(0.0048)	.	0.0015	(0.0011)	0.0034	(0.0013)	0.0013	Disc 38 mm Ø x 3 or 19 mm
IARM 289A	.	0.0003	.	.	.	0.008	0.0104	.	.	.	(0.002)	<0.005	.	Disc 31 mm Ø x 2 mm
IRSID 1819	.	(0.0004)	.	.	.	.	.	.	.	.	.	.	.	Block 47 mm x 47 mm x 30 mm
IARM 241D	(0.001)	0.0016	(0.0012)	.	(0.0005)	0.028	(0.005)	(0.0003)	.	(0.005)	(0.0022)	(0.007)	(0.005)	Disc 31 mm Ø x 2 or 18 mm
IARM 234C	(0.001)	0.0023	(0.0017)	.	(0.002)	0.053	(0.005)	(0.001)	.	(0.003)	0.0017	(0.003)	(0.006)	Disc 31 mm Ø x 2 or 18 mm
IARM 253A	.	0.0003	.	.	.	0.016	0.009	.	.	0.21	0.01	.	.	Disc 31 mm Ø x 2 mm
IARM 253B	0.0052	0.0007	(0.0006)	.	(0.0006)	0.021	0.007	(0.0002)	(0.0018)	0.13	(0.012)	(0.003)	.	Disc 31 mm Ø x 2 or 18 mm
ECRM 292-1D	(0.008)	.	(0.0006)	.	.	0.571	.	.	.	.	.	(0.001)	.	Disc 38 mm Ø x 25 or 30 mm
13X NSB1D	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm
CT 304	.	.	.	.	.	0.043	.	<0.001	.	.	0.017	.	.	Disc 30-35 mm Ø x ~16 mm
IARM Fe304H-18	0.0076	.	.	.	.	(0.010)	(0.008)	.	.	.	(0.014)	.	.	Disc 31 mm Ø x 2 mm
SS 468/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm
BS CA304-4	0.0063	0.0031	0.0075	70.7	0.000024	0.063	0.013	0.0008	(0.0002)	.	0.0024	(0.002)	0.0036	Disc ~38 mm Ø x ~38mm
13X 30403B	.	.	0.0027	.	.	0.0201	.	.	.	.	0.0139	.	.	Disc ~40 mm Ø x ~15 mm
BS 304C	0.0047	0.0005	(0.0002)	70.1	<0.005	(0.009)	0.0050	.	<0.05	H:0.0004	0.0119	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm
ECRM 287-1D	.	0.924	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zr	Units
IARM 162D	0.0072	0.0027	(0.003)	.	(0.0001)	0.0090	0.005	.	(0.0019)	.	0.0102	(0.005)	.	Disc 31 mm Ø x 2 mm
IARM Fe304L-22	0.0054	0.0010	0.0005	.	.	0.015	(0.005)	.	0.0025	.	0.0101	.	.	Disc 38 mm Ø x 3 or 19 mm
PV 111/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm
SS 463/1	.	0.0022	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm
TL 2003D	.	.	.	.	.	0.0150	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm
ECRM 297-1D	0.0040	1.146	(0.0002)	.	.	(0.0089)	.	.	.	.	.	.	(0.0002)	Disc 40 mm Ø x 30 mm
13X 30600A	.	.	.	.	0.0016	(0.004)	.	.	.	.	.	.	.	Disc ~32 mm Ø x ~20 mm
DSZU C017	.	.	0.0031	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm
BS 82E	.	0.0024	0.0014	.	.	0.062	.	.	.	.	0.006	.	.	Disc 38 mm Ø x ~7 to 19 mm
IARM Fe309-18	0.0065	.	.	.	.	0.021	.	.	0.0018	.	0.012	.	.	Disc ~38 mm Ø x ~3 or ~19 mm
BS 309	0.0048	(0.0004)	0.0010	62.6	(0.0002)	0.0090	0.0027	<0.005	(0.0017)	.	0.0089	<0.05	<0.005	Disc 38 mm Ø x ~7 or 19+ mm
13X 31008A	.	.	.	.	.	0.012	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm
BS 83G	.	(0.001)	.	.	.	0.061	0.0064	.	.	.	0.003	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 9841	(0.003)	0.0026	(0.0002)	.	.	0.070	(0.011)	(0.001)	(0.006)	.	0.006	.	(0.002)	Disc 44 mm Ø x ~7 or 19+ mm
BS 9842	(0.002)	0.0025	0.0010	.	.	0.026	(0.0044)	.	.	.	0.005	.	.	Disc 38 mm Ø x ~7 or 19+ mm
CZ SL-3A	.	0.002	.	.	.	0.013	.	.	.	.	0.006	.	.	Disc ~39 mm Ø x 25 mm
IARM 4E	(0.005)	0.0011	.	.	.	0.024	0.0021	.	.	.	0.0060	0.005	(0.001)	Disc 31 mm Ø x 2 mm
IARM 4F	(0.003)	(0.0012)	(0.002)	.	.	0.007	(0.004)	.	(0.001)	(0.001)	(0.005)	(0.007)	(0.002)	Disc 31 mm Ø x 2 or 18 mm
IARM 4G	(0.005)	0.0032	(0.001)	.	(0.007)	0.008	(0.003)	(0.0005)	(0.001)	(0.001)	0.008	(0.008)	(0.002)	Disc 31 mm Ø x 2 mm
SS 464/1	(0.003)	.	.	.	.	.	.	0.0004	.	.	.	.	.	Disc 38 mm Ø x 19 mm
IMZ 165	(0.003)	.	.	.	.	.	.	(0.001)	.	.	0.003	.	.	Disc 40 mm Ø x 40 mm
IMZ 166A	(0.0026)	.	.	.	.	.	.	.	.	.	(0.0035)	.	.	Disc 40 mm Ø x 40 mm
CT 316	.	.	.	.	.	.	.	0.001	.	.	0.006	.	.	Disc 30-35 mm Ø x ~19 mm
IARM 339A	(0.001)	0.0006	0.0014	.	(0.0001)	(0.005)	0.016	(0.002)	.	.	(0.002)	(0.005)	(0.003)	Disc 31 mm Ø x 2 mm
NILAB 500HA D	.	.	.	.	.	0.023	.	.	.	.	.	.	.	Disc 38 mm Ø x 20 mm
BS 316G	(0.006)	0.0023	0.0008	67.9	H:0.0004	0.063	0.0034	0.0006	0.0018	.	0.0100	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm
CZ SL-2A	0.008	0.002	.	.	.	.	.	.	.	.	0.01	.	.	Disc ~39 mm Ø x 25 mm
IARM Fe316L-23	(0.006)	0.0018	.	.	.	0.067	(0.007)	.	.	.	0.0063	.	.	Disc
SRM 1155a	(0.007)	(0.002)	.	(64.71)	.	0.0082	(0.003)	<0.005	.	.	(0.0069)	<0.0001	<0.003	Disc 32 mm Ø x 19 mm
SS 466/2	0.0020	0.0039	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm
IMZ 153A	.	.	.	.	.	0.034	.	.	.	.	.	.	.	Disc 38 mm Ø x 20 mm
TL 2002D	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm
PV 112/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm
VS LG72	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm
BS 317L	(0.003)	0.0012	0.0017	[62.8]	(0.0004)	0.031	(0.006)	(0.0002)	(0.002)	.	0.0049	(0.002)	(0.004)	Disc 37 mm Ø x ~7 or 19+ mm
BS 9941	(0.010)	0.0025	(0.0003)	.	.	0.015	(0.0058)	.	.	.	0.007	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 9942	(0.004)	0.0014	0.0014	.	.	0.005	(0.0023)	.	.	.	0.006	.	.	Disc 44 mm Ø x ~7 or 19+ mm
IARM 212D	(0.01)	0.001	(0.001)	.	.	(0.009)	0.0034	(0.001)	.	.	(0.003)	(0.003)	(0.004)	Disc 31 mm Ø x 2 mm
IARM Fe2205-18	.	.	.	.	.	0.011	(0.004)	.	.	.	(0.006)	.	.	Disc 31 mm Ø x 2 or 18 mm
13X NSA9B	.	0.0018	.	.	.	0.021	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
BS 2205A	0.0072	0.0022	0.0007	66.2	(0.0001)	0.010	0.0046	.	.	.	0.0058	.	(0.003)	Disc 38 mm Ø x ~7 or 19+ mm

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zr	Units

STAINLESS STEEL ALLOYS, CONTINUED ON THE NEXT PAGE

1 = CRM, 2 = RM, 3 = RM with no uncertainties

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
321		1	13X 32100A	0.0463	1.52	0.0298	0.0011	0.498	0.415	9.32	17.39	0.0247	0.105	0.282	0.0115	0.376	0.106	0.021
321	17034	1	BS 321D	0.060	1.76	0.024	0.022	0.27	0.358	9.09	17.42	0.103	0.096	0.274	0.0083	0.55	0.054	(0.03)
321	17034	1	BS 85D	0.048	1.69	0.024	0.024	0.54	0.45	9.98	17.09	0.13	0.97	0.59	(0.02)	0.48	0.132	(0.07)
321		2	HRT FE2014-H	0.027	1.91	0.023	(0.002)	0.39	0.25	9.92	17.16	.	.	0.41	(0.018)	0.31	.	.
321		1	IARM 6i	0.049	1.76	0.0208	(0.023)	0.31	0.202	9.20	17.76	0.084	0.052	0.133	(0.013)	0.60	0.048	(0.023)
321		1	IARM 6J	0.045	1.52	0.028	(0.002)	0.62	0.383	9.00	17.74	0.0195	0.191	0.387	0.0109	0.34	0.081	0.026
321		1	SRM 1171	0.067	1.81	(0.019)	(0.013)	0.536	0.1205	11.18	17.50	.	(0.097)	0.167	.	0.346	.	(0.012)
321		1	SS 465/1	0.066	1.380	0.021	0.012	0.405	0.098	9.24	17.31	0.026	0.053	0.092	.	0.40	0.102	.
321 - Ti		1	IMZ 152	0.065	1.42	0.010	0.0025	0.52	0.061	9.48	18.04	.	.	0.017	.	.	0.030	.
347		2	BS 347A	0.051	1.50	0.026	0.020	0.54	0.31	9.20	17.44	(0.002)	0.054	0.326	0.044	(0.002)	0.10	(0.03)
347		2	BS 347B	0.051	1.57	0.028	0.026	0.51	0.15	9.16	17.24	0.002	0.05	0.38	0.056	(0.002)	0.04	(0.005)
347		1	IARM 8G	0.042	1.468	0.0327	0.0126	0.36	0.390	9.02	17.20	0.0030	0.162	0.359	0.046	0.0024	0.062	0.032
347		1	IARM 8H	0.049	1.81	0.0250	(0.002)	0.40	0.192	9.08	17.14	(0.005)	0.083	0.237	0.027	0.0027	0.049	(0.016)
347		1	IARM 8i	0.0424	1.395	0.0352	0.0118	0.38	0.441	9.01	17.08	(0.0030)	0.301	0.416	0.052	(0.008)	0.057	0.060
347 H		2	BS 87F	0.055	1.64	0.024	0.025	0.67	0.28	10.12	17.30	0.004	0.17	0.29	0.037	0.004	0.13	0.050
348		1	SRM 1172	0.056	1.7	0.025	0.01	0.59	0.10	11.3	17.4	.	0.12	0.22	.	.	.	.
355	17025, 34	1	BS 355	0.136	0.862	0.0171	0.0003	0.374	0.173	4.18	15.43	0.0192	0.053	2.73	0.081	0.0007	0.106	0.0069
355		1	IARM 335A	0.138	0.85	0.016	0.0005	0.39	0.086	4.27	15.30	0.019	0.063	2.72	0.085	(0.002)	0.094	0.008
405		1	SRM 1295	0.027	0.387	0.022	0.0003	0.321	0.260	0.194	13.52	(0.20)	0.020	0.023	.	(0.01)	0.082	(0.002)
408		1	13X 40800A	0.032	0.804	0.034	0.030	0.80	0.299	0.58	12.32	0.042	0.033	0.268	0.0054	0.84	0.034	0.005
409		1	13X 40900A	0.035	0.716	0.0032	0.0059	0.616	0.134	0.231	10.98	0.0311	0.053	0.102	0.007	0.530	0.099	.
409		1	13X 40930A	0.0227	0.707	0.0104	0.0046	0.689	0.222	0.301	11.09	0.0362	0.0241	0.0328	0.0075	0.434	0.0339	.
409		1	IARM Fe409-20	0.010	0.387	0.021	(0.0007)	0.52	0.0655	0.110	11.28	0.017	0.019	0.011	0.010	0.141	0.075	0.0036
409 + Cr		1	NCS HS20743	0.015	0.949	0.038	0.0055	0.97	.	.	11.88	0.022	.	.	0.0155	0.411	.	.
410		1	13X 41008A	0.029	0.711	0.010	0.0048	0.641	0.091	0.319	12.36	0.076	0.049	0.036	0.0131	.	0.056	.
410		1	13X 41008B	0.034	0.684	0.013	0.0070	0.761	0.267	0.338	12.36	0.028	0.053	0.042	0.0088	.	0.061	.
410	25	1	BS 0021	0.128	0.420	0.021	0.008	0.354	0.040	0.100	12.00	0.008	0.015	0.016	0.029	(0.003)	0.029	0.005
410	25	1	BS 0022	0.050	0.41	0.018	0.011	0.62	0.036	0.23	12.36	0.078	0.017	0.117	0.033	0.002	0.034	(0.008)
410	17025, 34	1	BS 410C	0.131	0.381	0.0206	0.0051	0.366	0.084	0.352	12.78	0.0079	0.0185	0.055	0.039	0.0006	0.042	0.0131
410		2	CT 410	0.11	0.48	0.015	0.023	0.27	0.079	0.34	12.04	0.015	0.023	0.053	0.036	0.001	0.025	0.004
410		1	IARM Fe410-18	0.132	0.50	0.017	0.0014	0.29	0.046	0.280	12.2	(0.003)	0.012	0.146	0.046	.	0.065	(0.008)
410 + Mo		1	ECRM 296-1D	0.1166	0.676	0.0178	0.0026	0.242	0.1498	2.790	11.82	0.0275	0.0218	1.700	0.0214	.	0.363	.
410 + Mo		1	IMZ 161	0.074	0.29	0.023	0.023	0.65	0.56	0.55	12.90	.	.	1.10	.	.	0.33	1.05
410 H		1	13X 41001A	0.136	0.464	0.0142	0.0037	0.298	0.056	0.0939	12.06	(0.004)	0.0143	0.0102	0.0316	.	0.079	.
415		1	13X 41500A	0.038	0.596	0.021	0.0101	0.402	0.129	3.52	13.00	.	0.099	0.504	0.0504	0.0012	0.091	.
415		1	IARM Fe415-21	0.018	0.640	0.028	0.013	0.42	0.198	3.55	11.64	0.0018	0.065	0.537	0.073	0.0013	0.086	0.042
416		1	IARM Fe416-22	0.114	0.83	0.019	0.37	0.39	0.064	0.230	12.98	(0.0016)	0.019	0.027	0.036	0.0015	0.038	(0.004)
416 Se		2	BS 151	0.090	0.41	0.021	0.018	0.65	0.11	0.24	13.19	(0.002)	0.018	0.088	0.022	(<0.003)	0.046	0.010
418		1	IARM Fe418-18	0.168	0.429	0.016	(0.0005)	0.32	0.22	2.00	12.4	(0.004)	0.029	0.104	0.031	.	0.046	2.63

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
420		1	13X 42000A	0.208	0.679	0.0241	0.0253	0.496	0.202	0.295	12.56	.	0.0161	0.0398	0.0273	.	0.046	.
420	LAST	2	BS 98	0.309	0.48	0.019	0.0014	0.72	0.098	0.21	13.35	0.003	0.020	0.034	0.0181	0.002	0.075	0.009
420	17034	1	BS 420	0.325	0.366	0.0175	0.0008	0.73	0.054	0.152	13.41	(0.003)	0.0174	0.017	0.0150	0.0017	0.054	(0.004)
420		2	BS SS4951	0.333	0.58	0.016	0.0012	0.62	0.033	0.15	13.55	0.002	0.013	0.009	0.0127	0.002	0.032	(0.003)
420		2	BS SS4952	0.347	0.41	0.016	0.003	0.66	0.045	0.23	13.15	0.003	0.030	0.049	0.027	0.002	0.089	(0.007)
420		1	ECRM 272-1D	0.2815	0.600	0.0156	0.0196	0.420	0.0192	0.2445	11.927	0.0046	0.0145	0.0030	0.0508	0.00096	0.0167	.
420		1	IARM 154C	0.339	0.423	0.0174	0.0043	0.37	0.120	0.215	12.41	(0.0034)	0.016	0.036	0.054	0.0015	0.043	(0.005)
420		1	SS 469	0.279	0.598	0.015	0.020	0.421	(0.02)	0.246	11.93	.	(0.01)	.	.	.	(0.02)	.
422		1	13X 42200A	0.220	0.651	0.0182	0.0012	0.314	0.136	0.738	11.41	0.0020	0.0114	1.042	0.0585	.	0.246	1.177
422	17025, 34, last	1	BS 422	0.232	0.640	0.0169	0.0013	0.404	0.080	0.676	11.25	0.0135	0.0293	0.896	0.050	0.0011	0.274	0.95
422	17034	1	BS 422A	0.206	0.68	0.015	0.0013	0.349	0.040	0.66	11.72	0.0063	0.014	0.96	0.066	0.0017	0.228	1.04
422		2	BS 97	0.216	0.71	0.021	0.0004	0.39	0.066	0.76	11.82	0.018	0.041	1.05	0.030	(0.002)	0.21	0.95
422		1	IARM Fe422-22	0.239	0.687	0.021	0.0095	0.44	0.126	0.616	12.22	0.0024	0.022	0.97	0.050	0.0017	0.210	1.03
430	17034	1	BS 430	0.064	0.706	0.0239	0.0022	0.38	0.120	0.223	16.58	0.0015	0.018	0.052	0.057	(0.002)	0.055	(0.007)
430	last	2	BS 91E	0.066	0.42	0.017	0.002	0.52	0.05	0.17	16.58	(0.002)	0.02	0.035	0.032	(0.002)	0.09	0.01
430		1	IARM 11D	0.070	0.400	0.023	0.004	0.83	0.085	0.60	17.35	0.015	0.024	0.075	0.021	(0.003)	0.052	0.008
430		1	NCS HS20742	0.083	1.02	0.015	0.0035	0.636	.	.	16.58	.	.	.	.	.	.	.
431	17025, 34	1	BS 431	0.146	0.579	0.0232	0.0047	0.393	0.282	2.25	15.8	0.0019	0.050	0.092	0.049	0.0007	0.062	0.012
431	17034	1	BS 431A	0.159	0.53	0.019	0.0036	0.31	0.111	2.21	15.78	(0.0012)	0.041	0.172	0.058	0.0010	0.079	0.021
431	LAST	2	BS 92B	0.150	0.42	0.021	0.003	0.42	0.13	2.12	15.92	(0.002)	0.04	0.17	0.073	(0.002)	0.07	0.02
431		2	HRT FE2010-H	0.18	0.60	0.024	0.004	0.39	0.08	1.94	15.95	.	0.023	0.13	.	.	0.044	0.024
431		1	IARM 12C	0.155	0.55	0.022	0.0032	0.34	0.33	2.23	15.78	(0.004)	0.048	0.125	0.056	(0.002)	0.040	0.015
431		1	SRM 1219	0.149	0.42	0.026	0.001	0.545	0.162	2.16	15.64	.	.	0.164	0.078	.	0.056	.
440 C		1	13X 44004B	1.012	0.378	0.0232	0.0018	0.440	0.0687	0.197	16.50	0.0160	0.0167	0.468	0.0308	(0.004)	0.0484	0.0156
440 C	LAST	2	BS 93E	1.02	0.52	0.022	0.0010	0.90	0.12	0.35	17.33	0.009	0.048	0.50	0.0359	0.007	0.24	0.11
440 C	17025, 34	1	BS 93F	1.047	0.59	0.0266	(<0.0025)	0.49	0.132	0.187	16.72	0.0052	0.021	0.46	0.051	0.0012	0.057	0.0016
440 C		1	IARM 13D	1.040	0.697	0.0195	0.0012	0.614	0.184	0.256	16.36	(0.006)	0.0212	0.488	0.0492	0.0035	0.058	0.046
440 F Se		2	BS 156	1.06	1.15	0.022	0.007	0.47	0.09	0.35	16.87	(<0.002)	0.047	0.50	0.041	0.001	0.13	0.11
440 F Se		1	IARM 353A	0.98	0.95	0.019	0.025	0.49	0.13	0.265	17.01	0.0018	0.032	0.50	0.027	0.0015	0.116	0.041
446		2	BS 94C	0.057	0.45	0.024	0.002	0.62	0.056	0.43	25.90	0.004	0.042	0.20	0.065	.	0.12	(0.03)
446		1	IARM 14C	0.061	0.385	0.021	0.0015	0.63	0.19	0.364	24.9	0.0041	0.043	0.101	0.058	0.013	0.078	0.031
450		2	BS 95A	0.035	0.58	0.026	0.004	0.46	1.50	6.42	14.72	0.002	0.081	0.73	0.0255	(0.003)	0.052	0.02
450	25	1	BS 9811	0.027	0.380	0.016	0.0010	0.36	1.63	6.55	14.87	(0.003)	0.055	0.744	0.0196	(0.003)	0.086	0.013
450	25	1	BS 9812	0.031	0.485	0.018	0.004	0.43	1.65	6.61	14.82	(0.002)	0.110	0.76	0.0195	(0.005)	0.088	0.025
450		2	CT 450	0.036	0.39	0.014	0.006	0.29	1.49	6.36	15.20	.	0.16	0.80	0.028	.	0.043	.
450		1	IARM 15C	0.032	0.760	0.019	0.0018	0.26	1.54	6.35	14.39	(0.005)	0.024	0.722	0.0148	(0.002)	0.041	(0.020)
455		1	13X 45500A	0.0041	0.0263	0.0049	0.0020	0.059	2.20	8.36	11.39	0.073	0.0152	0.0185	0.0030	1.187	0.0689	.
455		2	BS 96A	0.009	0.04	0.007	0.004	0.06	2.07	8.38	11.62	0.08	0.03	0.021	.	1.18	0.07	.
455		2	BS SS1962	0.008	0.06	0.006	0.0025	0.06	2.22	8.32	11.42	0.067	(0.015)	0.008	0.0025	1.11	0.071	(<0.02)
455		2	CT 455	0.012	0.074	0.010	0.005	0.13	2.32	8.22	11.37	.	.	0.027	0.002	1.18	.	.
455		1	IARM 16C	0.003	0.024	0.007	0.0046	0.03	2.08	8.23	11.34	0.072	0.017	0.009	0.0030	1.16	0.070	0.008
455		1	IARM Fe455-22	0.0037	0.036	0.006	0.0010	0.086	2.20	8.21	11.5	0.073	0.023	0.064	0.0031	1.16	0.070	.
465		1	13X 46500A	(0.003)	0.004	0.0020	0.0010	0.075	0.0373	10.91	11.70	0.069	0.0101	0.948	0.0031	1.51	0.0049	.
465		2	CT ISO123A	0.003	0.035	0.007	<0.0005	0.031	0.010	11.10	11.67	0.027	0.016	0.92	0.003	1.58	0.014	.
465		1	IARM 354A	0.0076	(0.012)	(0.0029)	(0.0019)	(0.04)	(0.018)	11.05	11.61	(0.05)	0.022	0.95	0.0018	1.56	(0.02)	(0.02)
630		2	CT 630	0.036	0.39	0.018	0.013	0.63	3.25	4.20	15.94	.	0.11	0.11	0.028	.	0.022	.
2209		1	IMZ 164	0.100	1.77	0.019	0.002	0.82	0.26	6.75	20.96	0.040	0.035	3.48	0.249	(0.003)	0.053	(0.025)
2304		1	IARM 317A	0.025	1.26	0.028	0.0007	0.39	0.21	4.19	22.5	0.005	0.064	0.249	0.123	(0.002)	0.061	0.015

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W

STAINLESS STEEL ALLOYS, CONTINUED FROM THE PREVIOUS PAGE

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zr	Units
13X 32100A	.	0.0025	.	.	.	0.0191	.	.	.	.	0.0115	.	.	Disc ~38 mm Ø x ~15 mm
BS 321D	0.0040	0.0012	(0.0003)	69.8	0.0007	(0.009)	0.0009	(0.0003)	(0.001)	.	0.0091	.	(0.001)	Disc 44 mm Ø x ~7 or 19+ mm
BS 85D	(0.01)	(0.001)	0.0004	[67.8]	.	0.062	(0.002)	(0.001)	(0.001)	.	0.0062	(0.001)	(0.004)	Disc 38 mm Ø x ~7 to 19+ mm
HRT FE2014-H	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35mm Ø x 20 mm
IARM 6i	(0.005)	0.0034	(0.0004)	.	.	(0.018)	0.0012	.	.	.	(0.0060)	.	(0.003)	Disc 31 mm Ø x 2 mm
IARM 6J	.	0.0024	.	.	.	0.010	(0.001)	.	.	.	(0.009)	(0.01)	.	Disc 31 mm Ø x 2 mm
SRM 1171	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 31 mm Ø x 19 mm
SS 465/1	.	0.0006	.	.	.	.	.	(<0.001)	.	.	.	.	.	Disc 38 mm Ø x 19 mm
IMZ 152	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm
BS 347A	(0.003)	(0.0004)	(0.0002)	.	.	0.79	0.0047	.	.	.	0.007	(<0.004)	.	Disc 38 mm Ø x 19+ mm
BS 347B	(0.003)	0.0036	(0.0005)	.	.	0.71	0.005	.	.	.	0.006	(<0.004)	.	Disc 38 mm Ø x ~7 or 19+ mm
IARM 8G	(0.007)	(0.0005)	(0.0005)	.	.	0.53	(0.003)	.	.	(0.01)	0.0107	(0.004)	(0.002)	Disc 31 mm Ø x 2 mm
IARM 8H	.	(0.0002)	.	.	.	0.48	(0.004)	.	.	.	(0.008)	(0.01)	.	Disc 31 mm Ø x 2 or 18 mm
IARM 8i	.	(0.0005)	.	.	.	0.60	(0.004)	.	.	.	(0.012)	.	.	Disc 31 mm Ø x 2 or 18 mm
BS 87F	0.005	(0.0006)	0.0007	.	.	0.57	0.005	.	.	.	0.004	.	.	Disc 41 mm Ø x ~7 or 19+ mm
SRM 1172	.	.	.	.	.	0.65	.	.	.	.	.	<0.001	.	Disc 32 mm Ø x 19 mm
BS 355	0.0039	(0.0001)	(0.0002)	[75.9]	(0.0002)	0.0103	0.0020	(0.00003)	(0.0009)	.	0.0038	(0.0001)	(0.003)	Disc 41 mm Ø x ~7 or 19+ mm
IARM 335A	(0.01)	0.0007	(0.001)	.	.	0.015	0.0020	.	.	.	0.0034	(0.01)	(0.002)	Disc 31 mm Ø x 2 or 18 mm
SRM 1295	(0.006)	(<0.0004)	.	.	.	(<0.0005)	.	(0.0001)	(0.003)	(<0.0001)	(0.02)	(<0.001)	.	Disc 32 mm Ø x 19 mm
13X 40800A	0.004	.	.	.	.	0.020	.	.	(0.002)	.	0.0028	(0.027)	.	Disc ~40 mm Ø x ~ 15 mm
13X 40900A	.	.	.	.	.	0.032	.	.	.	.	0.0080	.	.	Disc ~40 mm Ø x ~15 mm
13X 40930A	.	.	.	.	.	0.051	.	.	.	.	0.0069	.	.	Disc ~40 mm Ø x ~15 mm
IARM Fe409-20	0.0026	.	.	.	.	0.0041	.	.	0.0011	.	0.0053	.	Zn: 0.010	Disc 38 mm Ø x 2 or 19 mm
NCS HS20743	Als: 0.021	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 40 mm
13X 41008A	.	.	.	.	.	0.020	.	.	.	.	0.0077	.	0.007	Disc ~40 mm Ø x ~15 mm
13X 41008B	.	.	.	.	.	0.019	.	.	.	.	0.0081	.	0.047	Disc ~40 mm Ø x ~15 mm
BS 0021	(0.004)	(<0.0002)	(0.0002)	.	.	(0.001)	(0.004)	.	.	.	0.003	.	.	Disc 40 mm Ø x ~7 or 19+ mm
BS 0022	0.003	0.0007	.	.	(<0.0005)	0.007	(0.002)	(0.0006)	(0.0004)	.	0.004	.	(<0.003)	Disc 38 mm Ø x ~7 or 19+ mm
BS 410C	0.0029	(0.0001)	0.0022	[85.4]	(0.0003)	0.0056	0.0051	(0.0001)	(0.0002)	.	0.0023	(0.001)	(0.0002)	Disc 38 mm Ø x ~7 or 19+ mm
CT 410	.	.	.	.	.	0.001	.	<0.001	.	.	0.006	.	.	Disc 30-35 mm Ø x ~16 mm
IARM Fe410-18	.	.	.	.	.	0.0021	(0.009)	.	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm
ECRM 296-1D	0.0139	(0.0003)	.	.	.	.	.	0.00016	.	.	0.0131	.	.	Disc 38 mm Ø x 25 or 30 mm
IMZ 161	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm
13X 41001A	.	.	0.0010	.	.	.	.	.	.	.	0.0051	.	.	Disc ~41 mm Ø x ~15 mm
13X 41500A	.	.	.	.	.	0.040	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
IARM Fe415-21	0.0036	0.0008	.	Rem	.	0.0049	0.0075	.	0.0019	.	0.0104	.	(0.0013)	Disc 38 mm Ø x 3 or 19 mm
IARM Fe416-22	(0.003)	.	.	.	.	(0.004)	(0.008)	.	.	.	0.0041	.	.	Disc
BS 151	.	.	.	.	.	0.005	0.009	.	.	0.328	0.005	.	.	Disc 50 mm Ø x ~7 or 19+ mm
IARM Fe418-18	.	.	.	.	.	(0.019)	(0.004)	.	.	.	(0.005)	.	.	Disc 31 mm Ø x 2 or 18 mm

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zr	Units
13X 42000A	.	0.0013	.	.	.	.	.	.	.	.	0.0073	.	.	Disc ~38 mm Ø x ~15 mm
BS 98	(0.003)	(0.0002)	(0.0005)	.	.	0.003	0.0038	.	.	.	0.006	.	.	Disc 38 mm Ø x ~7 mm
BS 420	(0.003)	0.0002	0.0017	84.8	H:0.0001	(0.003)	0.0039	.	.	.	0.0041	.	0.0019	Disc 38 mm Ø x ~7 or 19+ mm
BS SS4951	0.002	(0.0002)	(0.0004)	.	.	0.006	0.0055	.	.	.	0.003	.	.	Disc 42 mm Ø x ~7 to 19+ mm
BS SS4952	0.002	(0.0004)	0.0019	.	.	0.004	0.005	.	.	.	0.004	.	.	Disc 38 mm Ø x ~7 or 19+ mm
ECRM 272-1D	0.0116	0.0018	0.00090	.	(0.0002)	0.0028	.	.	0.0007	.	.	.	Zn: 0.0031	Disc 38 mm Ø x 25 or 30 mm
IARM 154C	(0.004)	0.0007	.	.	.	0.014	(0.0042)	.	(0.001)	(0.0003)	0.0058	.	(0.0014)	Disc 31 mm Ø x 2 or 18 mm
SS 469	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 19 mm
13X 42200A	.	.	.	.	.	0.0203	.	.	.	.	0.0052	.	.	Disc ~38 mm Ø x ~15 mm
BS 422	0.0041	(0.0002)	0.0031	84.5	(0.0009)	0.045	0.0030	(0.00005)	(0.0007)	.	0.0043	(0.0001)	(0.001)	Disc 38 mm Ø x ~7, 19, or 50 mm
BS 422A	0.0031	0.0004	0.0012	84.0	H:0.00010	(0.009)	0.0023	.	0.0008	.	0.0039	.	0.0011	Disc 38 mm Ø x ~7 or 19+ mm
BS 97	.	.	.	.	.	0.007	.	.	.	.	(0.003)	.	.	Disc 35 mm Ø x ~7 or 19+ mm
IARM Fe422-22	0.0039	0.0006	0.0029	Rem	.	0.013	0.0073	(0.0017)	0.0009	.	0.0035	.	(0.0017)	Disc 38 mm Ø x 3 or 19 mm
BS 430	0.0037	(0.0004)	(0.0003)	81.7	(0.0002)	(0.007)	0.0075	(0.0006)	(0.001)	.	0.0084	(0.001)	.	Disc 44 mm Ø x ~7 or 19+ mm
BS 91E	.	.	0.0008	.	.	(0.004)	.	.	.	.	0.004	.	.	Disc 41 mm Ø x ~7 mm
IARM 11D	(0.005)	0.0006	(0.002)	.	(0.0003)	0.009	(0.004)	(0.0005)	.	(0.001)	0.006	(0.003)	(0.001)	Disc 31 mm Ø x 2 or 18 mm
NCS HS20742	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 40 mm
BS 431	0.0038	0.0003	0.0007	80.2	(0.0002)	0.034	0.0059	.	0.0011	.	0.0134	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm
BS 431A	0.0033	0.0002	(0.0003)	80.5	(0.0002)	0.0062	0.0067	(0.0003)	0.0012	.	0.0047	.	0.0012	Disc 38 mm Ø x ~7 or 19+ mm
BS 92B	.	(0.0002)	(0.0009)	.	.	(0.006)	0.0064	.	.	.	0.006	.	.	Disc 44 mm Ø x ~7 mm
HRT FE2010-H	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 20 mm
IARM 12C	(0.004)	0.0004	0.0007	.	(0.0002)	0.020	(0.005)	(0.0005)	.	.	0.008	(0.0005)	(0.001)	Disc 31 mm Ø x 2 or 18 mm
SRM 1219	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 34 mm Ø x 19 mm
13X 44004B	.	.	.	.	.	0.008	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
BS 93E	.	.	.	.	.	0.005	0.0040	.	.	.	0.003	.	.	Disc 41 mm Ø x ~7 mm
BS 93F	0.0056	(0.0001)	0.0019	[80.2]	(0.0006)	0.0029	0.0031	(0.0002)	0.0016	.	0.0059	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 13D	(0.008)	0.0005	(0.0007)	.	.	0.0074	0.0031	.	(0.0027)	.	0.011	(0.004)	(0.0017)	Disc 31 mm Ø x 2 or 18 mm
BS 156	.	.	.	.	.	0.005	0.0045	.	.	0.142	(0.004)	.	.	Disc 41 mm Ø x ~7 or 19+ mm
IARM 353A	(0.004)	(0.0006)	(0.0003)	.	.	(0.011)	(0.005)	(0.002)	.	0.17	0.0056	(0.004)	(0.002)	Disc 31 mm Ø x 2 or 18 mm
BS 94C	.	(0.0005)	0.0008	.	.	0.032	0.0061	.	.	.	0.006	.	.	Disc 44 mm Ø x ~7 or 19+ mm
IARM 14C	(0.003)	0.0005	(0.001)	.	(0.0005)	0.013	(0.006)	(0.0001)	(0.002)	(0.0001)	0.004	(0.002)	(0.001)	Disc 31 mm Ø x 2 or 18 mm
BS 95A	.	0.0010	0.0008	.	.	0.55	.	.	.	.	0.008	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 9811	(0.003)	(0.0003)	0.0014	.	.	0.62	(0.0060)	.	.	.	0.004	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS 9812	(0.005)	(0.0003)	0.0012	.	.	0.645	(0.007)	.	.	.	0.004	.	.	Disc 50 mm Ø x ~7 or 19+ mm
CT 450	.	.	.	.	.	0.67	.	0.001	.	.	0.008	.	.	Disc 30-35 mm Ø x ~15-19 mm
IARM 15C	0.0044	(0.0006)	(0.0004)	.	.	0.63	(0.003)	(0.003)	(0.003)	(0.0003)	0.009	(0.004)	(0.003)	Disc 31 mm Ø x 2 or 18 mm
13X 45500A	.	.	.	.	.	0.250	.	.	.	.	0.0048	(0.0050)	.	Disc ~38 mm Ø x ~15 mm
BS 96A	.	(0.0017)	.	.	.	0.26	.	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm
BS SS1962	0.002	0.0018	.	.	.	0.27	(0.001)	.	.	.	0.004	.	.	Disc 38 mm Ø x ~7 or 19+ mm
CT 455	.	0.0024	.	.	.	0.28	.	<0.001	.	.	0.004	.	.	Disc 30-35 mm Ø x ~19 mm
IARM 16C	(0.003)	0.0011	.	.	.	0.248	0.0014	.	.	.	(0.003)	.	0.0010	Disc 31 mm Ø x 2 or 18 mm
IARM Fe455-22	0.0028	0.0011	.	.	.	0.25	0.0014	.	.	.	0.0049	.	.	disc
13X 46500A	.	0.0016	.	.	.	0.005	.	.	.	.	0.0030	.	.	Disc ~32 mm Ø x ~20 mm
CT ISO123A	.	0.0021	.	74.72	.	<0.001	.	.	.	.	.	.	<0.002	Disc 44-47 mm Ø x ~16 mm
IARM 354A	(0.002)	0.0023	(0.0003)	.	(0.0001)	(0.02)	(0.0012)	(0.004)	(0.0002)	.	(0.002)	.	.	Disc 31 mm Ø x 2 or 18 mm
CT 630	.	0.0018	.	.	.	0.36	.	0.001	.	.	0.007	.	.	Disc 30-35 mm Ø x ~16 mm
IMZ 164	(0.005)	.	.	.	.	0.049	.	(0.002)	.	.	(0.003)	.	.	Disc 40 mm Ø x 40 mm
IARM 317A	(0.006)	0.0019	(0.0003)	.	.	(0.004)	0.0032	(0.001)	.	.	0.008	(0.004)	.	Disc 31 mm Ø x 2 or 18 mm

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zr	Units

STAINLESS STEEL ALLOYS

1 = CRM, 2 = RM, 3 = RM with no uncertainties

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
A-286	17025, 34	1	BS 188B	0.046	0.247	0.016	(0.0007)	0.266	0.120	24.81	14.32	0.168	0.274	1.30	0.0021	2.20	0.264	0.043
CA6NM		2	HRT FE2009-H	0.035	0.78	0.034	0.003	0.35	0.08	3.89	12.83	.	.	0.42	(0.0339)	.	0.043	0.058
CA6NM		1	IARM 327A	0.018	0.54	0.018	0.0010	0.43	0.082	3.83	12.73	(0.003)	0.019	0.53	0.0157	0.0026	0.036	0.009
CD6MN		1	VS LG58	0.48	0.99	0.0135	0.0280	0.292	0.388	4.26	23.4	.	.	2.41	.	0.039	0.264	0.21
CF-3		1	IRSID 1820	0.021	1.61	(0.021)	0.0079	0.428	0.045	9.07	19.51	.	0.151	0.115	0.064	.	.	.
CF3M		1	ECRM 284-3D	0.0025	0.0615	0.0049	0.0066	0.0442	0.0105	12.09	17.37	.	0.0366	2.236	0.0418	0.0050	.	0.0039
ER321		1	13X 32180A	0.031	2.11	0.007	0.0093	0.485	0.49	10.16	18.92	0.043	0.040	0.245	0.0067	0.81	0.026	0.039
Greek Ascoloy	LAST	2	BS 183A	0.172	0.35	0.016	0.0040	0.37	0.093	1.85	12.14	0.002	0.036	0.12	0.0256	0.002	0.090	2.60
Greek Ascoloy	17034	1	BS 183B	0.181	0.344	0.018	0.0042	0.41	0.074	1.96	12.45	0.0009	0.032	0.33	0.044	(0.0016)	0.165	3.5
Greek Ascoloy	17034	1	BS 183C	0.173	0.368	0.015	0.0040	0.427	0.060	1.87	12.72	0.0020	0.027	0.189	0.039	(0.002)	0.109	2.83
Greek Ascoloy		1	IARM 20C	0.18	0.30	0.018	0.007	0.35	0.060	1.93	12.15	(0.004)	0.031	0.12	0.0222	(0.003)	0.086	2.59
M-152		1	13X 64152A	0.114	0.666	0.0123	0.0020	0.224	0.0622	2.50	11.34	0.0315	0.0185	1.567	0.0339	.	0.275	.
M-152		1	IARM 291A	0.11	0.71	0.016	0.009	0.23	0.060	2.62	11.3	(0.004)	0.021	1.61	0.035	0.0011	0.29	(0.01)
RA330		2	BS 86F	0.054	1.30	0.021	0.0011	1.22	0.23	34.99	18.74	(0.007)	0.098	0.24	0.035	(0.006)	0.061	(0.03)
S32750		1	13X NSA13A	0.020	0.761	0.0249	0.0005	0.257	0.156	6.73	25.27	(0.007)	0.032	3.73	0.269	.	0.0712	0.035
S42027		1	13X 42027A	0.294	0.356	0.0139	0.0005	0.544	0.035	0.163	15.25	0.004	0.0191	0.990	0.402	(0.002)	0.048	0.019
Super Duplex		2	TL 2001D	0.0244	0.679	0.022	0.0006	0.27	0.612	7.5	25.58	.	0.046	3.49	0.279	.	0.079	0.57
Z30C13		1	IRSID 1825	0.305	0.650	0.019	0.022	0.336	0.100	0.308	12.90	.	0.026	0.052	.	.	0.052	.
Zeron 100		1	IARM FeZ100-18	0.017	0.52	0.026	(0.0009)	0.24	0.55	7.1	25.5	(0.017)	0.123	3.61	0.22	.	0.090	0.56
Zeron 100		1	13X NSA8B	0.0206	0.596	0.0248	0.0007	0.285	0.589	7.48	25.49	.	0.0448	3.49	0.232	.	0.0583	0.599

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zr	Units
BS 188B	0.0045	0.0047	(0.00003)	55.8	(0.0005)	0.099	0.0006	(0.0001)	(0.0006)	.	0.0051	(0.00003)	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm
HRT FE2009-H	.	.	(0.001)	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm
IARM 327A	(0.004)	(0.001)	.	.	(0.0003)	0.008	0.0047	.	.	.	0.006	(0.004)	(0.002)	Disc 31 mm Ø x 2 or 18 mm
VS LG58	.	.	.	.	.	0.214	.	.	.	.	.	.	.	Disc ~47 mm Ø x ~30 mm
IRSID 1820	.	(0.0013)	.	.	.	.	.	.	.	.	.	.	.	Block 47 mm x 47 mm x 30 mm
ECRM 284-3D	0.00131	0.00020	.	.	.	.	.	.	.	.	0.00074	.	.	Disc 39 mm Ø x 28 mm
13X 32180A	(0.003)	(0.0011)	.	.	.	(0.0021)	.	.	(0.0011)	.	0.0116	.	.	Disc ~40 mm Ø x ~ 15 mm
BS 183A	(0.002)	(<0.0005)	0.0020	.	.	0.006	0.0065	.	(0.001)	.	0.003	.	.	Disc 38 mm Ø x ~10 to 19 mm
BS 183B	(0.005)	(0.0007)	(0.0003)	80.4	(0.0002)	(0.0075)	(0.0054)	(0.0003)	0.0009	.	0.0046	(0.004)	(0.0009)	Disc 38 mm Ø x ~7 or 19+ mm
BS 183C	0.0041	(0.0008)	0.0006	81.1	(0.0002)	0.0054	(0.005)	(0.0002)	0.0007	.	0.0039	(0.003)	(0.0005)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 20C	.	.	.	.	.	0.010	0.0068	.	.	.	0.004	.	.	Disc 31 mm Ø x 2 mm
13X 64152A	.	.	.	.	.	.	.	.	.	.	0.0053	.	.	Disc ~38 mm Ø x ~15 mm
IARM 291A	.	0.001	.	.	.	0.022	0.014	.	.	.	0.004	(0.001)	<0.005	Disc 31 mm Ø x 2 or 18 mm
BS 86F	(0.003)	0.0026	(0.001)	.	.	0.19	.	(0.001)	.	.	0.004	.	.	Disc 44 mm Ø x ~7 or 19+ mm
13X NSA13A	.	0.0030	.	.	.	0.028	.	(0.0008)	.	.	0.0046	.	.	Disc ~40 mm Ø x ~15 mm
13X 42027A	.	.	.	.	.	0.004	.	.	.	.	0.0026	.	.	Disc ~40 mm Ø x ~15 mm
TL 2001D	.	.	.	.	.	0.024	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm
IRSID 1825	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 30 mm
IARM FeZ100-18	.	0.002	.	.	.	(0.005)	(0.003)	.	.	.	(0.006)	.	.	Disc 31 mm Ø x 2 or 18 mm
13X NSA8B	.	0.0017	0.0011	.	.	0.026	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zr	Units

HIGH ALLOY STEEL ALLOYS

1 = CRM, 2 = RM, 3 = RM with no uncertainties

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
20, 20Cb3, CN7M		2	CT 20 Cb-3	0.034	0.19	0.017	0.003	0.38	3.28	33.55	19.63	.	0.035	2.25	.	.	0.053	.
20, 20Cb3, CN7M	LAST	2	BS 187A	0.022	0.52	0.017	0.0025	0.26	3.10	33.06	19.75	(0.009)	0.32	2.06	0.0157	(0.002)	0.10	(0.02)
42		2	CT ISO138A	0.002	0.48	0.001	0.006	<0.010	<0.001	39.98	<0.001	0.002	0.64	<0.001	<0.001	0.34	0.090	.
42		2	CT ISO139A	0.021	1.00	0.001	0.0005	0.015	<0.001	41.69	0.004	.	0.066	<0.001	.	.	.	.
254 SMO	17034	1	BS 254	0.019	0.95	0.026	0.0009	0.312	0.612	18.47	20.2	<0.01	0.08	6.07	0.210	0.0019	0.062	(0.02)
254 SMO		1	IARM Fe254SMO-21	0.017	0.892	0.022	0.0010	0.301	0.77	18.1	19.7	0.022	0.118	6.09	0.200	0.004	0.052	0.041
254 SMO		1	NILAB 501HA D	0.014	0.858	0.020	0.003	.	0.761	17.69	19.79	0.003	0.159	6.14	0.2243	.	0.044	.
904 L		1	13X NSA12A	0.0192	1.272	0.0267	0.0007	0.492	1.485	24.84	19.63	0.0169	0.090	4.20	0.0662	.	0.0660	0.047
904 L		1	ECRM 295-1D	0.0166	1.758	0.0167	0.0004	0.418	1.481	24.40	19.51	0.0203	0.0450	3.996	0.0615	.	0.0453	.
904 L		1	IARM Fe904L-22	0.0133	1.14	0.020	0.0007	0.654	1.30	24.0	19.3	0.036	0.126	4.03	0.045	0.0020	0.064	0.024
A-286		1	IARM 26D	0.038	0.224	0.013	(0.0008)	(0.05)	0.047	24.6	14.29	0.29	0.040	1.23	0.0035	2.17	0.223	0.036
A-286		1	SRM 1230	0.044	0.64	0.023	0.0007	0.43	0.14	24.2	14.8	0.24	0.15	1.18	.	2.12	0.23	.
Aermet 100		2	CT ISO045A	0.228	0.002	0.001	0.0004	<0.010	0.006	11.38	3.12	0.004	13.39	1.18	.	0.005	.	.
Aermet 100		1	IARM 242A	0.24	0.018	0.002	0.0004	0.02	0.007	11.1	3.00	0.004	13.5	1.21	0.0003	0.009	0.01	<0.01
Aermet 100		1	IARM FeA100-18	0.222	(0.013)	(0.004)	(<0.001)	(0.039)	(0.010)	11.2	2.98	(0.007)	13.4	1.19	(0.0010)	(0.008)	(0.007)	(0.006)
AL6XN, CN3MN		1	13X NSA11A	0.0159	0.640	0.0186	<0.001	0.275	0.187	23.89	20.18	(0.021)	0.0981	6.16	0.203	.	0.0513	0.038
AL6XN, CN3MN	17025, 34	1	BS 189A	0.0147	0.639	0.019	(0.001)	0.30	0.184	23.8	20.4	0.0129	0.100	6.04	0.198	0.0065	0.054	0.037
AL6XN, CN3MN		1	IARM 157D	0.0154	0.626	0.016	0.0005	0.28	0.196	23.9	20.31	0.020	0.102	6.08	0.203	0.009	0.050	0.036
CD3MN		1	ECRM 298-2D	0.0140	0.788	0.0210	0.0006	0.331	0.105	6.87	24.91	0.0148	0.0482	3.78	0.277	0.0023	0.070	0.0094
CD4MCU	17034	1	BS CD4MCU	0.045	0.568	0.025	0.021	0.71	2.93	5.62	24.46	0.0063	(0.03)	1.98	0.229	0.021	0.108	0.024
CD4MCU	17034	1	BS CD4MCU-A	0.021	0.38	(0.008)	0.0072	0.31	2.92	5.18	24.6	(0.009)	(0.005)	1.92	0.0112	0.021	(0.006)	(0.009)
CN7M		1	VS LG64	0.049	0.75	0.017	0.0032	0.76	2.88	28.3	24.7	0.189	.	2.89	.	0.64	0.094	0.013
High Perm		2	CT ISO124A	0.011	0.73	0.007	0.006	0.40	0.015	48.07	0.079	.	0.012	0.009	.	.	<0.001	.
High Perm		2	CT ISO136A	0.018	0.44	0.001	<0.001	0.198	<0.001	44.92	0.002	.	0.009	<0.001	.	.	.	.
High Perm 49		2	CT ISO141A	0.0199	0.31	0.001	<0.001	0.28	<0.001	47.16	<0.001	0.001	0.030	<0.001	<0.001	0.014	0.024	.
Invar 36		1	14X 93603A	0.0101	0.339	0.0050	0.0045	0.153	0.0460	35.79	0.024	0.0404	0.0974	0.0145	0.0057	0.0011	.	.
Invar 36	17034	1	BS 186B	0.022	0.288	(0.0027)	0.0016	0.254	0.057	36.1	0.11	0.0080	0.041	0.025	0.0033	0.0028	(0.002)	(0.007)
Invar 36 + Se		2	BS 186A	0.040	0.72	0.008	0.0053	0.19	0.016	35.86	0.16	(0.001)	0.028	0.0032	0.0026	(<0.003)	0.0012	(0.01)
Invar 36 + Se		1	IARM 24B	0.053	0.82	0.009	0.0010	0.28	0.052	35.86	0.121	0.002	0.036	0.011	0.0017	0.002	<0.005	<0.04
Invar 36 + Se		1	IARM FeINVR36-22	0.0497	0.78	0.0041	0.0019	0.307	0.058	36.0	0.094	0.0023	0.010	0.012	0.0021	(0.0020)	0.0013	(0.0328)
Invar 42		1	14X 94100A	0.0055	0.443	0.0051	0.0027	0.103	0.0628	41.00	0.0265	.	0.0208	0.0053	0.0016	0.0011	.	0.0017
Kovar	17025, 34, LAST	1	BS 160A	0.0064	0.180	0.0007	(0.0002)	0.158	0.026	29.6	0.0138	0.088	17.0	0.0100	0.0026	0.026	0.0008	(0.0001)
Kovar	17034	1	BS 160B	0.022	0.27	0.0033	0.0032	0.112	0.059	29.13	0.06	(0.005)	17.24	0.047	0.0006	(0.003)	0.0039	(0.011)
Kovar		1	IARM 98B	0.007	0.18	0.002	0.0007	0.17	0.028	29.4	0.012	0.07	17.0	0.010	0.0024	0.03	(0.003)	(0.02)
Kovar		1	IARM FeKovar-18	0.024	0.26	(0.004)	(0.0055)	(0.09)	0.077	29.0	0.068	.	17.3	0.062	.	.	.	(0.020)

Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W

Number	As	B	Ca	Ce	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zn	Zr	Units
CT 20 Cb-3	.	0.0023	.	.	.	.	0.86	.	0.002	.	.	0.003	.	.	.	Disc 30-35 mm Ø x ~19 mm
BS 187A	.	0.0022	.	(0.025)	.	.	0.57	0.0029	.	.	.	0.003	<0.002	.	.	Disc 41 mm Ø x ~7 mm
CT ISO138A	.	.	.	.	58.53	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
CT ISO139A	.	.	.	.	57.10	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
BS 254	(0.006)	0.0018	(0.0003)	.	52.9	(0.0002)	(0.03)	0.0038	<0.01	0.0014	.	0.0063	<0.01	.	0.0026	Disc 38 mm Ø x ~7 or 19+ mm
IARM Fe254SMO-21	0.0044	0.0009	0.0024	.	53.7	.	(0.0083)	0.0025	.	0.0017	.	0.0041	(0.0046)	.	(0.0017)	Disc 38 mm Ø x 3 or 19 mm
NILAB 501HA D	.	.	.	.	.	.	0.007	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 20 mm
13X NSA12A	.	0.0020	.	.	.	.	0.0088	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
ECRM 295-1D	0.0041	0.0018	.	.	48.36	(0.0003)	.	.	.	0.0007	.	0.0025	.	.	.	Disc 38 mm Ø x 25 mm
IARM Fe904L-22	0.0044	(0.0005)	0.0041	.	49.0	0.0009	0.017	0.0018	(0.0004)	0.0018	.	0.0051	(0.0031)	.	(0.0024)	Disc 40 mm Ø x 3 or 19 mm
IARM 26D	.	0.0063	.	.	.	.	(0.007)	.	.	.	.	0.0039	.	.	.	Disc 31 mm Ø x 2 or 18 mm
SRM 1230	.	0.0055	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
CT ISO045A	.	.	.	.	70.70	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~19 mm
IARM 242A	.	(0.0005)	.	.	.	.	0.004	0.0006	.	.	.	(0.001)	0.008	.	.	Disc 31 mm Ø x 2 mm
IARM FeA100-18	.	.	.	.	.	.	(0.003)	(0.0009)	.	.	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm
13X NSA11A	.	.	.	.	.	.	0.150	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm
BS 189A	0.0039	(0.0002)	(0.0004)	.	[48.1]	.	(0.13)	0.0024	.	.	.	0.0035	.	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 157D	.	0.0007	.	.	48.0	.	0.149	.	.	.	.	0.0036	.	.	.	Disc 31 mm Ø x 2 or 18 mm
ECRM 298-2D	0.0028	0.0024	.	.	.	.	0.0011	.	.	0.0006	.	0.0029	.	.	.	Disc 38 mm Ø x 25 mm
BS CD4MCU	0.0040	0.0028	(0.001)	.	63.2	(0.0003)	(0.004)	0.019	(0.0009)	.	.	(0.03)	.	(0.01)	(0.002)	Disc 36 mm Ø x 26 mm
BS CD4MCU-A	0.0022	(0.0008)	(0.001)	.	64.5	(0.0003)	(0.009)	0.0061	(0.002)	(0.0007)	.	0.0024	.	.	(0.002)	Disc 44 mm Ø x 19+ mm
VS LG64	.	.	.	.	.	.	0.048	.	.	.	.	.	.	.	.	Disc ~47 mm Ø x ~30 mm
CT ISO124A	.	.	.	.	50.65	.	.	.	.	.	0.167	.	.	.	.	Disc 44-47 mm Ø x ~11 or ~19 mm
CT ISO136A	.	.	.	.	54.27	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
CT ISO141A	.	.	.	.	52.12	0.0002	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm
14X 93603A	.	.	.	.	.	0.0019	.	.	.	.	.	.	.	.	(0.0009)	Disc ~40 mm Ø x ~15 mm
BS 186B	0.0022	(0.0006)	(0.0007)	.	63.0	(0.0004)	(0.002)	0.0011	(0.003)	(0.0007)	.	0.0025	(0.005)	.	0.0020	Disc 43 mm Ø x ~7 or 19+ mm
BS 186A	.	.	.	.	.	.	(<0.002)	.	.	.	0.229	(0.002)	.	.	.	Disc 38 mm Ø x ~7, ~12, or 19 mm
IARM 24B	<0.005	(0.001)	.	.	62.6	.	<0.01	0.003	.	.	0.19	0.0018	<0.005	.	<0.005	Disc 31 mm Ø x 2 mm
IARM FeINVR36-22	0.0029	0.0019	.	.	Rem	.	(0.0016)	(0.0042)	(0.0016)	(0.0006)	0.21	0.0042	(0.0023)	.	(0.0015)	Disc 38 mm Ø x 3 or 19 mm
14X 94100A	.	.	.	.	.	0.0021	(0.01)	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
BS 160A	0.0011	0.0010	(0.0004)	.	52.9	0.0032	0.0014	0.0022	(0.00006)	(0.0004)	.	0.0024	(0.0001)	.	0.0048	Disc 38 mm Ø x 19 mm
BS 160B	<0.005	0.0003	0.0004	.	53.0	<0.005	0.0015	0.0010	<0.005	(0.0009)	.	0.0020	<0.005	.	(0.0027)	Disc 38 mm Ø x ~7 or 19+ mm
IARM 98B	<0.002	0.001	<0.0005	.	52.9	0.0040	0.002	0.0021	<0.0005	.	.	0.002	<0.05	<0.0005	<0.01	Disc 31 mm Ø x 2 mm
IARM FeKovar-18	.	.	.	.	53.3	.	.	.	.	.	.	0.0021	.	.	.	Disc 31 mm Ø x 2 or 18 mm

Number	As	B	Ca	Ce	Fe	Mg	Nb	O	Pb	Sb	Se	Sn	Ta	Zn	Zr	Units

PURE IRON

= class, where 1 = CRM and 2 = RM T = total

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	Co	N	O
1	SRM 1265a	0.0067	0.0057	0.0011	0.0055	0.008	0.0058	0.041	0.007	0.0050	(0.0007)	0.007	.	.
1	DSZU C01a	0.0046	0.0012	0.0011	0.0049	0.0035	0.0063	0.0038	0.0034	0.0003	0.0054	(0.0005)	(0.03)	(0.01)
2	CZ LA-0A	(0.006)	0.045	0.005	0.005	0.0015	0.012	0.028	0.022	(0.0044)	0.0015	0.002	0.0023	.
2	CZ LA-0B	(0.003)	0.038	0.0037	0.0023	(0.0043)	0.0074	0.0070	0.009	(0.0016)	(0.0010)	(0.0017)	0.0027	.
1	IARM 27G	(0.003)	(0.003)	(0.003)	0.0011	(0.07)	0.040	0.045	0.043	(0.002)	(0.0013)	(0.0009)	(0.0003)	0.025
1	**BS LC-7A**	0.0025	0.023	0.013	0.0030	0.0056	0.0038	0.0058	0.0074	0.0034	0.0194	0.0017	0.0043	(0.005)
1	**BS 50G**	0.0023	0.010	0.0088	0.0033	0.009	0.007	0.0045	0.008	(0.001)	0.008	0.0011	0.0019	0.0030
2	TL 1669 *	0.00226	0.0955	0.0137	0.0100	0.0093	0.0217	0.0160	0.0246	0.0011	0.03553T	0.0019	0.0024	.
1	ECRM 098-1D	0.00051	0.00008	(0.00006)	0.00031	0.00048	.	.	0.00571	0.00085	.	.	0.00024	.
1	ECRM 097-2D	.	0.012	0.00538	0.00181	0.00285	0.00793	0.0241	0.0213	0.00370	.	0.0139	0.00294	.

Number	As	B	Mg	Nb	Pb	Sn	Ti	V	W	Units
SRM 1265a	(0.0002)	0.00013	.	.	0.00001	.	(0.0001)	0.0006	.	disc 32 mm Ø x 19 mm
DSZU C01a	(0.0002)	(0.0002)	.	(0.0006)	(0.0003)	0.0003)	(0.0001)	(0.0007)	0.0008	disc ~39 mm Ø x 30 mm Fe: 99.92
CZ LA-0A	(0.0015)	.	.	Sb:(0.0007)	(0.001)	(0.001)	0.001	.	.	disc ~37 mm Ø x 25 mm
CZ LA-0B	0.0024	.	.	.	.	(0.0013)	.	.	.	disc ~39 mm Ø x ~25 mm
IARM 27G	(0.0016)	(0.0006)	(0.0002)	(0.002)	(0.002)	(0.001)	<0.005	(0.001)	<0.005	disc 31 mm Ø X 2 or 18 mm
BS LC-7A	0.0024	(0.0001)	(0.0001)	(0.0005)	(0.0004)	(0.0007)	0.0004	(0.0004)	(0.0005)	disc 38 mm Ø x 38 mm **17025, 17034**
BS 50G	0.0034	(0.0001)	(0.0002)	(0.0004)	(0.00007)	Sb:0.0005	(0.003)	(0.0003)	.	disc 38 mm Ø x 38 mm **17025, 17034**
TL 1669 *	0.0017	0.00038	.	0.00046	0.00013	0.0071	0.0504	(0.0006)	.	disc 38 mm Ø x 25 mm
ECRM 098-1D	.	.	.	.	.	.	.	.	.	octagon 35 mm Ø x 25 mm
ECRM 097-2D	0.00281	0.00012	Sb:0.00012	Ta:0.00015	Zn:0.00014	0.00043	.	0.00011	0.00386	disc 38 mm Ø x 25 or 30 mm

* TL-1669 also contains in ppm Ca: 1.7, Sb: 4.9, Zn: 2.7

RM CARBON STEEL XRF SET

Part Number: BS CS-10 AVAILABLE INDIVIDUALLY **17025, 17034** ~7 mm discs

Grade	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	As	Co	N	Sn	V
Pure Iron	BS 50F	0.0064	0.082	0.0066	0.0031	0.016	0.0088	0.016	0.022	0.0017	0.003	0.0013	0.0023	0.0042	0.0010	(0.0003)
1018	**BS 1018**	0.195	0.79	0.012	0.024	0.237	0.130	0.104	0.177	0.044	0.029	0.0041	0.0058	0.0079	0.0099	0.0009
1020	BS 57F	0.196	0.554	0.009	0.027	0.202	0.197	0.070	0.120	0.018	(0.002)	(0.006)	0.007	0.0077	0.008	0.063
1026	BS 4932	0.234	0.76	0.010	0.015	0.25	0.15	0.080	0.144	0.033	(0.001)	(0.005)	0.005	0.0080	0.008	0.060
1035	BS 4931	0.352	0.80	0.011	0.016	0.27	0.217	0.070	0.093	0.024	(0.001)	0.005	0.006	0.0080	0.009	0.058
1040	**BS 1040**	0.402	0.79	0.010	0.032	0.229	0.241	0.067	0.123	0.021	(0.0019)	(0.006)	0.0069	0.0111	0.009	0.030
1045	BS 56E	0.483	0.72	0.010	0.025	0.24	0.015	0.015	0.021	0.005	0.062	0.0035	0.005	0.0056	(0.0006)	(<0.002)
1095	BS 64C	0.920	0.22	0.015	0.0024	0.22	0.016	0.038	0.261	0.008	(0.005)	.	0.004	0.0084	(0.001)	0.005
1522 (LF2)	BS 2932	0.208	1.20	0.008	0.020	0.186	0.060	0.034	0.077	0.026	0.022	(0.003)	0.004	0.0080	0.005	0.001
1345	BS XCCV	0.44	1.75	0.012	0.024	0.28	0.015	0.019	0.041	0.007	0.033	0.0023	0.006	0.0056	(0.0004)	(<0.003)

CRM CARBON STEEL SET

AVAILABLE IN SET/6 ONLY 38 mm Ø x 30 mm

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Al.Sol	Ti	Ti.Sol	V
NCS HS11719-5	1.19	2.20	0.011	0.013	0.751	0.046	0.164	0.439	0.036	0.034	0.029	0.028	0.0082
NCS HS11719-1	0.963	0.586	0.022	0.010	0.241	0.111	0.206	0.131	0.019	0.017	0.016	0.015	0.035
NCS HS11719-3	0.435	1.14	0.045	0.020	0.163	0.160	0.114	0.086	0.019	0.016	0.024	0.023	0.099
NCS HS11719-4	0.140	1.30	0.084	0.020	0.526	0.276	0.344	0.198	0.160	0.155	0.132	0.128	0.153
NCS HS11719-2	0.042	0.048	0.105	0.0053	0.154	0.411	0.432	0.247	0.296	0.292	0.161	0.154	0.207
NCS HS11719-6	0.0060	0.163	0.0053	0.035	0.014	0.0032	0.013	0.021	0.0021	0.0016	0.0010	(0.0008)	0.363

CRM SOLUBLE ALUMINUM AND SOLUBLE BORON STEEL SET

available in set/6 only as grouped .T = total .S = soluble 37 mm Ø x 30 mm

Number	Al.T	Al.S	B.T	B.S	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo
NCS HS93703-1a	0.59	0.58	0.036	0.034	1.04	2.10	0.023	0.030	0.650	0.033	0.063	4.05	0.0088	0.0040
NCS HS93703-2	0.92	0.91	0.0083	0.0080	0.055	0.021	0.027	0.0033	0.827	0.422	1.09	3.09	0.262	1.56
NCS HS93703-3	0.107	0.103	0.0041	0.0037	0.792	1.34	0.013	0.038	1.09	0.532	0.533	2.11	0.488	0.397
NCS HS93703-4	0.083	0.078	0.0050	0.0048	0.475	0.612	0.015	0.015	2.57	0.687	2.01	1.31	0.403	0.977
NCS HS93703-5	(1.29)	(1.27)	0.0017	0.0015	0.651	1.53	0.036	0.0052	0.024	0.236	2.98	0.021	0.094	0.631
NCS HS93703-6	0.64	0.63	0.0033	0.0030	0.246	0.211	0.045	0.0058	0.274	0.092	3.83	0.505	0.145	0.203

Number	As	Bi	Ca	Nb	Pb	Sb	Sn	Ti	V	W	Zr
NCS HS93703-1a	0.034	0.0013	(0.0001)	0.300	(0.0001)	(0.0004)	0.0035	0.069	0.021	0.313	(0.0005)
NCS HS93703-2	0.0034	0.0006	0.0010	0.254	0.0008	0.0020	0.0069	0.346	0.376	1.97	0.087
NCS HS93703-3	0.0019	0.0004	0.0010	0.506	0.0007	0.0040	0.054	0.016	0.071	0.755	0.014
NCS HS93703-4	0.056	(0.0002)	(0.0001)	0.167	0.0006	0.0095	0.012	0.035	0.709	1.48	0.069
NCS HS93703-5	0.0064	0.0015	0.0007	0.0057	0.0007	0.010	0.015	0.111	0.231	0.050	0.41
NCS HS93703-6	0.011	(0.0002)	(0.0001)	0.070	0.0011	0.0006	0.017	0.246	0.526	1.04	0.22

CARBON STEEL **CONTINUED ON THE NEXT PAGE** # = Class, where 1 = CRM and 2 = RM

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	B	Ca	Co	Mo
1	IRSID 1660	1.20	0.280	0.014	0.010	0.173	0.059	0.072	(0.026)	(0.009)	.	.	.	.	.	.
1	ECRM 090-1D	1.05	0.226	0.013	0.0095	0.281	.	0.053	0.121	.	.	.	.	.	.	0.009
1	SRM 1227	0.97	0.402	0.014	0.026	0.215	0.006	0.007	0.019	.	.	.	.	.	0.003	0.003
1	SS 602/2	0.94	0.66	0.023	0.031	0.057	(0.06)	(0.02)	(0.03)	0.096	.	.	.	.	(0.007)	(0.004)
2	BS 64C	0.920	0.22	0.015	0.0024	0.22	0.016	0.038	0.261	(0.005)	.	.	.	.	0.004	0.008
2	HRT FE2014-N	0.91	1.97	0.012	(0.004)	0.24	0.01	0.02	0.35	0.016	.	.	.	.	.	0.01
1	VS UG128	0.816	0.405	0.014	0.0139	0.324	0.0235	0.032	0.038	0.0078	.	.	.	.	.	.
1	ECRM 056-2D	0.8181	0.5073	0.0103	0.0093	0.2006	0.0129	0.0218	0.0146	.	0.00024	.	.	.	.	.
1	**BS 54J**	0.78	0.77	0.0090	0.0108	0.552	0.080	0.037	0.177	0.0021	.	0.0025	<0.0005	.	0.0042	0.0138
1	SRM 1224	0.75	0.41	0.009	0.039	0.173	0.072	0.054	0.071	0.060	.	.	.	.	.	0.013
1	VS UG129	0.728	.	.	0.013	.	.	.	.	0.0014	.	.	.	.	.	.
1	VS RG28	0.70	0.84	0.031	.	1.161	0.050	0.154	0.135	0.066	.	.	.	.	.	0.090
1	VS RG28/1	0.68	0.91	0.031	0.0071	2.36	0.040	0.168	0.194	0.068	.	.	.	.	0.072	0.104
1	IARM 373A	0.63	0.70	0.0123	0.031	0.22	0.107	0.048	0.096	0.002	.	0.0046	0.0003	0.0005	0.005	0.0176
1	VS UG20/6	0.58	0.473	(0.008)	(0.02)	0.229	0.249	0.360	0.396	.	.	.	.	.	.	.
1	NM 309	0.57	0.80	0.037	0.046	0.20	.	0.034	0.081	.	.	.	.	.	.	.
1	SS 435/1	0.52	0.41	0.033	0.031	0.54	.	0.060	0.14	.	.	.	.	.	.	.
1	IARM Fe1050-18	0.499	0.79	0.0045	0.027	0.223	0.179	0.068	0.100	(0.003)	.	(0.0030)	(0.0005)	.	0.0056	0.018
1	SS 435/2	0.489	0.390	0.037	0.042	0.328	.	0.133	0.184	.	.	.	.	.	0.011	.
2	BS 56E	0.483	0.72	0.010	0.025	0.24	0.015	0.015	0.021	0.062	.	0.0035	.	(<0.0005)	0.005	0.005
1	IRSID 1636	0.47	0.78	0.029	0.037	0.40	0.135	0.092	(0.060)	(0.007)	.	.	.	.	.	.
1	SS 459/2	0.467	0.909	0.0482	0.0481	0.640	.	.	.	0.015	(0.013)	.	0.0110	.	0.0890	.
1	**BS 1045**	0.458	0.796	0.0069	0.023	0.215	0.190	0.060	0.108	(0.001)	.	0.0050	(0.0003)	0.0013	0.0056	0.0170
1	IARM 200D	0.453	0.749	0.0103	0.024	0.225	0.232	0.097	0.109	(0.004)	.	0.0050	.	.	0.007	0.0217
1	VS UG123	0.45	0.552	0.016	0.026	0.216	0.196	0.084	0.111	0.024	.	.	.	.	.	.
1	IRSID 1657	0.445	0.724	0.028	(0.013)	0.274	.	0.048	(0.022)	0.004	.	0.0051	.	.	.	(0.008)
1	NM 306	0.44	0.80	0.043	0.042	0.34	.	.	0.26	.	.	.	.	.	.	.
1	IRSID 1648	0.432	1.41	0.031	(0.070)	0.242	0.408	0.165	0.170	(0.004)	.	(0.038)	.	.	.	(0.028)
1	NM EN-8	0.42	0.82	0.02	0.02	0.21	.	.	.	.	.	.	.	.	.	.
1	IRSID 1642	0.418	0.929	0.031	(0.031)	0.388	0.097	0.068	(0.035)	(0.020)	.	(0.042)	.	.	.	(0.009)
1	IRSID 1647	0.418	0.701	0.019	(0.027)	0.299	(0.104)	0.093	0.490	(0.060)	(0.0555)	.	.	.	.	.
1	IARM 210D	0.412	0.73	0.0052	0.030	0.230	0.273	0.122	0.096	(0.002)	.	0.0059	0.0004	0.0009	0.007	0.034
1	IARM 349A	0.41	1.49	0.011	0.025	0.192	0.300	0.178	0.189	0.0020	.	0.005	0.0003	0.0015	0.0085	0.059
1	IRSID 1652	0.406	0.931	(0.017)	0.040	0.386	0.345	0.190	0.184	.	(0.0013)	0.038	.	.	.	(0.042)
1	**BS 1040**	0.402	0.79	0.010	0.032	0.229	0.241	0.067	0.123	(0.0019)	.	(0.006)	0.0003	0.0011	0.0069	0.021
1	IRSID 1637	0.401	0.940	0.030	0.030	0.378	0.097	0.068	(0.033)	0.022	.	0.042	.	.	.	(0.006)
1	VS UG131	0.39	0.56	0.0100	0.0031	0.207	0.030	0.026	0.853	.	.	.	.	.	.	.
1	SS 605/2	0.400	0.345	0.054	0.015	0.54	(0.06)	(0.05)	(0.06)	0.027	.	.	.	.	(0.008)	(0.01)
1	IRSID 1644	0.394	0.594	0.021	0.031	0.287	0.265	0.158	0.138	(0.017)	.	.	.	.	.	.
1	ECRM 084-1D	0.391	0.860	.	0.029	0.265	0.267	0.154	.	.	.	.	.	.	.	0.033
1	IRSID 1649	0.384	0.930	0.045	(0.047)	0.250	0.418	0.226	0.321	0.004	.	0.037	.	.	.	0.043
1	SS 460/2	0.383	0.616	0.0374	0.0099	0.126	.	.	.	0.024	(0.019)	.	0.0027	.	0.0106	.
1	VS RG30	0.38	0.357	.	0.013	0.45	0.161	0.62	3.06	.	.	.	.	.	0.50	0.62
1	**BS 1035**	0.362	0.758	0.0100	0.028	0.246	0.241	0.123	0.151	0.0008	.	0.0051	(0.0002)	0.0017	0.0073	0.049
1	IRSID 1655	0.355	1.018	(0.018)	(0.060)	0.443	0.415	0.188	0.157	(0.004)	.	(0.036)	.	.	.	(0.043)
1	IRSID 1663	0.353	0.967	0.0090	0.034	0.235	0.180	0.148	0.206	0.037	.	0.028	.	.	.	0.042
1	**BS 1030A**	0.34	0.763	0.0059	0.016	0.28	0.189	0.141	0.112	0.0021	.	(0.005)	(0.0003)	.	0.0061	0.029
1	VS UG90	0.34	0.286	0.0079	0.012	0.221	0.200	0.265	0.261	0.037	0.032	0.0044	.	.	.	0.046
1	VS UG19/6	0.34	0.274	(0.03)	(0.03)	0.136	0.148	0.262	0.227	.	.	.	.	.	.	.
1	IARM 360A	0.331	0.733	0.008	0.023	0.260	0.235	0.078	0.113	0.0016	.	0.0060	0.0004	0.0017	0.0067	0.024
1	**BS 1030**	0.331	0.682	0.0101	0.0299	0.261	0.269	0.078	0.124	0.0014	.	0.0055	0.0003	0.0012	0.0069	0.0182
1	SS 4527/1	0.323	1.30	0.035	0.017	0.055	0.22	0.19	0.067	.	.	0.015	.	.	.	0.054
1	IARM 209D	0.322	0.68	0.0084	0.021	0.268	0.243	0.079	0.137	(0.003)	.	0.0060	0.0002	0.002	0.007	0.037
1	IRSID 1653	0.312	0.962	0.034	(0.039)	0.400	0.453	0.218	0.358	<0.004	.	(0.039)	.	.	.	(0.038)
1	VS RG27	0.30	0.91	0.054	0.0032	0.42	0.188	0.135	1.53	0.88	.	.	.	.	0.071	0.222
1	VS UG121	(0.3)	0.55	0.014	0.027	0.244	0.180	0.078	0.126	0.023	.	.	.	.	.	.
1	SS 434/2	0.275	1.54	0.061	0.0141	0.51	.	0.037	0.238	.	.	.	.	.	.	.
1	IRSID 1654	0.270	0.979	0.036	(0.047)	0.354	0.441	0.241	0.328	.	.	0.040	.	.	.	(0.043)
1	**BS 1026A**	0.270	0.76	0.0064	0.021	0.180	0.094	0.081	0.123	0.0091	.	(0.005)	(0.0003)	0.0025	(0.005)	0.053
1	IARM 359A	0.267	0.686	0.0094	0.020	0.233	0.186	0.068	0.121	0.002	.	0.0073	0.0003	0.0013	0.0069	0.023
1	VS UG94	0.26	0.186	0.0037	0.0026	0.101	0.088	0.178	0.206	0.017	.	.	.	.	.	0.0005
1	VS UG18/6	0.242	0.213	(0.003)	(0.003)	0.20	0.063	0.273	0.237	.	.	.	.	.	.	.
2	HRT FE2016-N	0.23	0.85	0.015	0.011	0.32	0.02	0.15	0.21	0.033	.	.	.	.	.	.
1	IARM Fe1020-18	0.226	0.547	0.006	0.024	0.235	0.198	0.078	0.125	(0.003)	.	0.0044	.	.	0.0065	0.0252
1	BS 1020B *	0.22	0.59	0.014	0.023	0.23	0.16	0.060	0.12	0.002	.	<0.05	0.0002	0.001	0.006	0.018
1	BS 1020A *	0.22	0.58	0.014	0.023	0.23	0.16	0.060	0.12	0.002	.	<0.05	0.0002	0.001	0.006	0.018

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	B	Ca	Co	Mo
1	IMZ 112A	0.212	0.471	0.0055	0.0188	0.257	0.068	0.055	0.099	0.017	.	0.023	0.0010	.	0.080	0.054
1	**BS 1020**	0.210	0.568	0.0058	0.0249	0.250	0.184	0.059	0.109	0.0006	.	0.0074	(0.0001)	0.0022	0.0070	0.018
1	IARM 213C	0.201	0.922	0.007	0.025	0.25	0.149	0.068	0.099	0.0019	.	0.0058	0.0003	0.0014	0.0074	0.022
1	IRSID 1664	0.2008	0.472	0.0106	0.0259	0.0616	0.0820	0.0547	0.0707	.	0.0193	0.0115	(0.0002)	(0.0005)	(0.0084)	0.0157
1	SS 601/3	0.197	1.248	0.0292	0.0279	0.323	.	.	.	0.0600	.	.	.	.	.	(0.006)
2	BS 57F	0.196	0.554	0.009	0.027	0.202	0.197	0.070	0.120	(0.002)	.	(0.006)	.	(0.0003)	.	0.007
1	**BS 1018**	0.195	0.79	0.012	0.024	0.237	0.130	0.104	0.177	0.029	.	0.0041	(0.0002)	(0.0004)	0.0058	0.044
1	IMZ 112B	0.195	0.43	0.022	0.016	0.27	0.055	0.046	0.034	(0.03)	.	.	.	.	.	0.043
1	**BS 1018A**	0.192	0.73	0.0078	0.020	0.197	0.134	0.092	0.094	0.0199	.	0.0040	0.0003	0.0008	0.0062	0.035
2	BS 2971	0.187	1.01	0.015	0.024	0.237	0.065	0.111	0.152	0.022	.	0.003	.	.	.	0.040
1	VS UG132	0.180	0.466	0.0075	0.0030	0.201	0.039	0.024	0.035	.	.	.	.	.	.	.
1	12X 10180D	0.179	0.807	0.014	0.025	0.286	0.066	0.053	0.0251	(0.003)	.	0.0068	.	.	0.007	0.0026
1	IARM 28K	0.174	0.80	0.012	0.027	0.291	0.171	0.0638	0.107	(0.0025)	.	(0.005)	0.0005	.	0.0060	0.0210
1	**BS 1016**	0.172	0.77	0.011	0.020	0.193	0.153	0.067	0.091	0.0200	.	0.0066	(0.0003)	(0.0004)	0.0193	0.040
1	12X 10180C	0.171	0.803	0.0150	0.0200	0.147	0.0500	0.0284	0.0793	0.0198	.	0.0029	.	.	.	0.0047
1	BS 1016A *	0.17	0.73	0.012	0.012	0.21	0.054	0.041	0.11	0.020	.	0.003	<0.005	0.0008	0.005	0.037
1	BS 1016B *	0.17	0.73	0.012	0.014	0.22	0.053	0.040	0.11	0.021	.	<0.005	0.0002	0.0008	0.005	0.037
1	NM 304A	0.17	0.56	0.098	0.022	0.21	.	.	0.0092	.	.	.	.	.	.	.
2	TL 1000	0.1692	1.4281	0.0142	0.0164	0.2258	0.0120	0.0312	0.0635	0.0226	.	(0.0016)	0.00018	0.00039	0.0042	0.0076
1	VS RG25	0.167	0.131	0.014	.	0.084	.	0.046	0.057	0.015	.	.	.	.	.	0.0028
1	VS UG124	0.165	1.41	0.019	0.032	0.384	0.020	0.015	0.035	0.039	.	.	.	.	.	.
1	VS UG109	0.161	0.353	0.020	0.0037	0.151	0.082	0.0053	0.048	0.0093	.	.	.	.	.	.
1	IARM 213D	0.158	0.725	0.0120	0.031	0.226	0.207	0.076	0.093	(0.003)	.	(0.006)	(0.0004)	.	0.009	0.0131
1	IMZ 71A	0.126	0.493	0.0126	0.0075	0.494	0.90	0.036	0.505	0.019	.	0.016	0.0009	.	0.025	0.018
1	SS 456/3	0.1215	0.2121	0.0228	0.0246	0.267	.	0.0174	0.0257	0.0393	.	.	0.0014	.	0.0520	0.0013
1	VS UG93	0.100	0.140	0.0033	0.0024	0.48	0.028	0.126	0.137	0.15	.	.	.	.	.	0.0008
1	VS UG122	(0.1)	0.433	(0.02)	(0.02)	0.396	0.288	0.378	0.72	.	.	.	.	.	.	.
1	VS UG17/6	0.097	0.106	(0.003)	(0.004)	0.37	(0.02)	0.105	0.127	.	.	.	.	.	.	.
1	VS UG120	0.096	0.685	0.027	(0.02)	0.96	0.447	0.634	0.75	0.011	.	.	.	.	.	.
1	SS 433/2	0.096	1.188	0.011	0.0083	0.007	.	0.037	0.026	.	.	.	.	.	.	.
1	DSZU C041a	0.085	1.35	0.021	0.0092	0.59	0.046	0.032	0.035	0.029	.	(0.004)	(0.0005)	.	0.010	0.0038
1	DSZU C041b	0.084	1.44	0.0176	0.0272	0.76	0.092	0.049	0.049	0.006	.	0.004	0.0006	(0.0007)	(0.004)	0.005
1	VS UG108	0.074	0.104	0.050	0.0082	.	0.0087	0.0092	.	.	.	.	.	.	.	.
1	SRM 1228	0.072	0.365	0.004	0.018	0.007	0.012	0.018	0.016	0.061	.	.	.	.	.	0.009
1	ECRM 057-2D	0.0507	0.246	0.0120	0.0127	.	0.0146	0.0096	0.0114	0.059	.	.	.	.	.	.
1	IARM Fe1215-18	0.043	0.96	0.059	0.29	(0.006)	0.164	0.055	0.051	.	.	0.0043	.	.	0.0055	0.016
1	ECRM 083-2D	0.0315	0.2160	0.0106	0.00561	0.00747	0.0127	0.0116	0.0219	0.0784	.	0.00177	.	.	0.00236	.
1	DSZU C03	0.029	0.089	0.0062	0.0081	0.145	0.206	0.146	(0.27)	0.014	.	0.008	0.0004	.	0.013	0.031
1	VS RG26	0.028	0.75	0.0037	.	0.173	0.011	.	0.025	0.30	.	.	.	.	.	0.015
1	SS 431/2	0.0249	0.902	0.121	0.0065	0.015	.	0.040	0.049	.	.	.	.	.	.	.
1	**BS XCAS**	0.024	0.471	0.008	0.0064	0.339	0.020	0.031	0.035	(0.027)	.	0.0016	(0.0002)	.	0.0086	0.0069
1	**BS XCCS-2**	0.021	0.58	0.0055	0.0059	0.40	0.047	0.099	0.039	0.073	.	(0.004)	0.021	0.0032	0.016	0.013
1	VS UG2/11	0.020	0.024	0.0029	0.0031	0.075	0.0120	0.0045	0.021	0.034	.	.	.	.	.	.
1	DSZU C040A	0.013	0.012	0.0023	0.0029	0.060	0.007	0.005	0.007	0.039	.	(0.0002)	0.00032	0.0021	(0.002)	(0.001)
1	**BS 1005**	0.008	0.219	0.0118	0.0088	0.050	0.011	0.012	0.029	0.026	.	(0.003)	(0.0002)	(0.005)	0.0026	0.0033
1	**BS 1009**	0.008	0.212	0.0118	0.0086	0.048	0.011	0.0129	0.028	0.026	.	0.0011	(0.0002)	0.0033	0.0020	(0.003)
1	SS 11171	0.0070	0.1623	0.0045	0.0049	0.0039	0.0089	0.0161	0.0055	.	.	0.0011	.	.	0.0053	0.0005
1	VS 005/1	0.007	0.028	0.0031	0.0053	0.044	0.068	0.072	0.047	0.317	.	0.0026	.	.	0.0083	0.005
1	SS 432/2	0.0065	0.712	0.017	0.036	0.082	.	0.0196	0.016	.	.	.	.	.	.	.
1	VS 003/1	0.006	0.037	0.0037	0.0054	0.084	0.063	0.072	0.034	0.202	.	0.0025	.	.	0.0081	0.0053
2	CZ LA-1B	0.005	0.13	0.004	0.017	0.020	0.01	0.014	0.042	0.003	.	(0.002)	0.010	0.0016	(0.002)	0.007
1	IMZ 110A	0.0034	0.067	0.0051	0.0045	.	0.021	0.021	0.027	(0.001)	.	.	.	.	0.0031	0.0035
1	VS 004	0.0033	0.040	0.0033	0.0033	0.0116	0.078	0.119	0.087	0.257	.	0.0040	.	.	0.011	.
1	VS 004/1	0.0031	0.040	0.0030	0.0033	0.010	0.078	0.119	0.087	0.257	.	0.0041	.	.	0.0104	(0.0080)
1	VS 002	0.0024	0.104	0.0052	0.0055	0.033	0.0074	0.0061	0.0147	0.054	.	0.0010	.	.	0.0011	0.00042
1	VS 002/1	0.0022	0.103	0.0052	0.0056	0.032	0.0071	0.0061	0.015	0.053	.	(0.001)	.	.	0.0010	(0.0004)

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	B	Ca	Co	Mo

CARBON STEEL CONTINUED FROM THE PREVIOUS PAGE

Number	N	Nb	O	Pb	Sb	Sn	Ti	V	W	Zn	Zr	Units
IRSID 1660	.	.	.	.	.	.	.	.	.	.	.	37 mm Ø x 30 mm
~~ECRM 090-1D~~	~~0.0146~~	~~0.00043~~	~~.~~	~~0.00239~~	~~0.00090~~	~~.~~	~~.~~	~~0.204~~	~~.~~	~~0.00209~~	~~.~~	~~38 mm Ø x 30 mm~~
SRM 1227	.	.	.	.	.	.	.	0.002	.	.	.	32 mm Ø x 19 mm
SS 602/2	.	.	.	.	.	.	.	(0.001)	.	.	(<0.005)	44 mm Ø x 19 mm
BS 64C	0.0084	(<0.003)	.	.	.	(0.001)	(0.002)	0.005	.	.	.	44 mm Ø X ~7 or 19+ mm
HRT FE2014-N	0.0052	.	.	.	.	.	.	0.066	.	.	.	~35 mm Ø x 20 mm
VS UG128	0.0088	.	.	.	.	.	.	0.0046	.	.	.	~38 mm Ø x ~20 mm
ECRM 056-2D	.	.	.	.	.	.	.	.	.	.	.	44 mm Ø x 25 or 30 mm
BS 54J	0.0060	(0.002)	(0.0011)	.	(0.0006)	(0.005)	0.0020	0.0014	0.0024	Fe:97.6	.	38 mm Ø x ~7 or 19+ mm **17034**
SRM 1224	.	.	.	.	.	.	.	0.002	.	.	.	32 mm Ø x 19 mm
VS UG129	.	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~20 mm
VS RG28	.	0.029	.	.	.	.	0.0041	0.022	0.006	.	.	~45 mm Ø x ~28 mm
VS RG28/1	.	0.041	.	.	.	.	0.022	0.035	0.0041	.	.	~45 mm Ø x ~28 mm
IARM 373A	0.0088	0.001	0.002	(0.001)	(0.002)	0.0069	0.0017	0.023	(0.002)	(0.003)	(0.003)	31 mm Ø x 2 mm
VS UG20/6	.	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm
NM 309	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm last
SS 435/1	.	0.039	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm
IARM Fe1050-18	0.0097	(0.0013)	0.0026	.	0.0015	0.0103	0.0008	0.0270	.	Fe:98.0	.	31 mm Ø x 2 or 18 mm
SS 435/2	.	0.134	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm
BS 56E	0.0056	(<0.002)	.	(0.0001)	0.0004	(0.0006)	(0.001)	(<0.002)	.	.	.	44 mm Ø x ~13 to ~18 mm last
IRSID 1636	.	.	.	.	.	.	.	.	.	.	.	48 mm Ø x 30 mm
SS 459/2	.	0.0102	.	0.0044	0.0121	.	.	0.0585	.	.	(0.074)	38 mm Ø x 19 mm
BS 1045	0.0113	0.026	0.0040	(0.0005)	0.0017	0.0084	0.0011	(0.002)	(0.0007)	Fe:98.1	(0.0009)	38 mm Ø x ~7 or 19+ mm **17034**
IARM 200D	0.009	0.0010	.	.	.	0.0079	(0.0013)	0.0244	(0.003)	.	.	31 mm Ø X 2 or 18 mm
VS UG123	0.0078	.	.	.	.	.	.	0.0019	.	.	.	~45 mm Ø x ~25 mm
IRSID 1657	.	.	.	.	.	.	.	(0.001)	.	.	.	42 mm Ø x 30 mm
NM 306	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 25 mm last
IRSID 1648	.	.	.	.	.	0.033	.	.	.	.	.	40 mm Ø x 28 mm
NM EN-8	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm last
IRSID 1642	.	.	.	.	.	.	.	(0.002)	.	.	.	45 mm Ø x 30 mm
IRSID 1647	.	.	.	.	.	.	.	.	.	.	.	41 mm Ø x 30 mm
IARM 210D	0.011	0.001	0.0034	0.001	0.002	0.010	0.0104	0.024	(0.002)	.	(0.001)	31 mm Ø x 2 or 18 mm
IARM 349A	0.0100	0.0012	0.003	(0.001)	(0.003)	0.015	0.0013	0.027	0.004	(0.003)	(0.002)	31 mm Ø x 2 or 18 mm
IRSID 1652	.	.	.	.	.	0.030	.	.	.	.	.	45 mm Ø x 30 mm
BS 1040	0.0111	(0.0012)	0.0023	.	0.0022	0.009	0.0018	0.030	.	Fe:98.0	H:0.0002	28 mm Ø x ~7 or 19+ mm **17034**
IRSID 1637	.	.	.	.	.	.	.	(0.002)	.	.	.	45 mm Ø x 30 mm
VS UG131	0.0070	.	.	.	.	.	.	.	.	.	.	~39 mm Ø x ~25 mm
SS 605/2	.	.	.	.	.	.	.	(0.001)	.	.	(0.12)	44 mm Ø x 19 mm
IRSID 1644	.	.	.	.	.	.	.	.	.	.	.	45 mm Ø x 30 mm
ECRM 084-1D	.	.	.	.	.	0.023	.	.	.	.	.	38 mm Ø x 25 or 30 mm
IRSID 1649	.	.	.	.	.	0.028	.	.	.	.	.	40 mm Ø x 28 mm
SS 460/2	.	0.068	.	0.0005	(0.0006)	.	.	0.0322	.	.	(<0.0005)	38 mm Ø x 19 mm
VS RG30	.	0.139	.	.	.	.	.	0.63	0.91	.	.	~45 mm Ø x ~28 mm
BS 1035	0.0105	(0.001)	0.0036	(0.001)	(0.002)	0.0027	0.0007	0.026	0.0020	Fe:97.9	(0.0009)	40 mm Ø x ~7 or 19+ mm **17034**
IRSID 1655	.	.	.	.	.	0.046	.	.	.	.	.	40 mm Ø x 34 mm
IRSID 1663	.	.	.	.	.	0.0143	0.051	.	.	.	.	44 mm Ø x 30 mm
BS 1030A	0.0082	(0.0007)	0.0047	.	0.0014	(0.015)	0.0014	0.0261	(0.0011)	0.0033	Fe:98.0	38 mm Ø x ~7 or 19+ mm **17034**
VS UG90	0.015	.	.	.	0.0011	.	0.039	.	.	.	.	~47 mm Ø x ~30 mm
VS UG19/6	.	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm
IARM 360A	0.0102	0.0015	0.004	(0.001)	0.0023	0.010	0.0010	0.039	(0.001)	(0.003)	(0.001)	31 mm Ø x 2 or 18 mm
BS 1030	0.0107	(0.0004)	0.005	0.0005	0.0024	0.0114	0.0005	0.031	0.0012	last	(0.0002)	38 mm Ø x ~7 mm **17025**
SS 4527	.	.	.	.	.	0.094	0.031	.	0.054	.	.	38 mm Ø x 19 mm
IARM 209D	0.0107	0.0014	0.005	0.001	0.004	0.012	0.0011	0.042	(0.002)	(0.003)	.	31 mm Ø x 2 or 18 mm
IRSID 1653	.	.	.	.	.	0.066	.	.	.	.	.	40 mm Ø x 34 mm
VS RG27	.	.	.	.	.	.	.	0.064	0.170	.	.	~45 mm Ø x ~28mm
VS UG121	0.0068	.	.	.	.	.	.	0.0018	.	.	.	~45 mm Ø x ~25 mm
SS 434/2	0.0104	0.038	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm
IRSID 1654	.	.	.	.	.	0.030	.	.	.	.	.	40 mm Ø x 34 mm
BS 1026A	0.0100	0.0008	0.0042	.	0.0013	0.0068	(0.0006)	0.0257	0.0009	Fe:98.3	.	38 mm Ø x ~7 or 19+ mm **17034**
IARM 359A	0.0094	0.002	0.0044	(0.001)	(0.002)	0.0100	0.0009	0.027	(0.001)	.	(0.001)	31 mm Ø x 2 or 18 mm
VS UG94	.	.	.	.	.	.	0.053	(0.001)	.	.	.	~40 mm Ø x ~28 mm
VS UG18/6	.	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm
HRT FE2016-N	0.0055	.	.	.	.	.	.	.	.	.	.	35 mm Ø x 20 mm
IARM Fe1020-18	0.0098	(0.0012)	(0.007)	.	0.0018	0.0080	.	0.036	.	Fe:98.5	.	31 mm Ø x 2 or 18 mm
BS 1020B *	0.010	<0.005	<0.05	<0.005	<0.005	0.017	0.002	0.035	0.005 * Provisional		<0.005	38 mm Ø x ~7 or 19+ mm
BS 1020A *	0.010	<0.005	<0.05	<0.005	<0.005	0.017	0.002	0.035	0.005 * Provisional		<0.005	38 mm Ø x ~7 or 19+ mm

Number	N	Nb	O	Pb	Sb	Sn	Ti	V	W	Zn	Zr	Units
IMZ 112A	0.0058	0.0123	.	0.008	0.021	0.162	0.0138	0.043	0.072	0.0020	.	38 mm Ø x 20 mm
BS 1020	0.0109	(0.0003)	0.0046	(0.0002)	(0.0018)	0.0090	(0.0005)	0.0363	(0.0004)	.	(0.0005)	44 mm Ø x ~7 or 19+ mm **17025**
IARM 213C	0.0116	0.0011	0.0042	0.0011	0.002	0.0081	0.0010	0.035	(0.002)	(0.006)	(0.0004)	31 mm Ø x 2 mm
IRSID 1664	0.0072	(0.0002)	.	0.0002	0.0012	0.0108	0.0013	(0.0005)	<0.002	(0.0007)	(0.0001)	37 mm Ø x 30 mm
SS 601/3	.	.	.	.	.	.	.	(0.002)	.	.	(<0.005)	38 mm Ø x 19 mm
BS 57F	0.018	.	(0.006)	.	.	0.008	.	0.0077	0.063	.	.	44 mm Ø X ~7 mm last
BS 1018	0.0079	(0.0006)	0.0014	(0.0006)	(0.001)	0.0099	0.0009	0.0009	0.0014	Fe:98.2	(0.001)	38 mm Ø x ~7 or 19+ mm **17034**
IMZ 11ZB	0.0100	0.013	.	.	.	0.15	0.010	0.045	.	.	.	40 mm Ø x 40 mm
BS 1018A	0.0061	0.0012	(0.0015)	0.0005	0.0012	0.0075	0.0006	0.0019	Fe:98.5	Mg:0.0002	0.0011	38 mm Ø x ~7 or 19+ mm 17034
BS 2971	0.0084	.	.	.	.	(0.005)	.	(0.002)	.	.	.	44 mm Ø X ~13 mm last
VS UG132	0.0054	.	.	.	.	.	.	.	.	.	.	~39 mm Ø x ~25 mm
12X 10180D	0.007	.	.	.	.	0.0033	.	.	.	.	.	~40 mm Ø x ~15 mm
IARM 28K	(0.008)	0.0017	(0.005)	.	.	0.0075	(0.0015)	(0.0014)	.	.	.	31 mm Ø x 2 mm
BS 1016	0.0113	(0.0009)	(0.003)	(0.004)	Fe:98.4	0.013	0.0010	0.0011	(0.0013)	.	(0.001)	Hexagon ~60 mm Ø x 19+ mm **17034**
12X 10180C	0.0052	.	.	.	.	0.0024	.	.	.	0.0005	.	~40 mm Ø x ~15 mm
BS 1016A *	0.006	<0.005	<0.005	<0.005	<0.005	0.005	0.001	0.003	0.001 * Provisional		0.0006	38 mm Ø x ~7 or 19+ mm
BS 1016B *	0.006	<0.005	<0.005	<0.005	<0.005	0.004	0.001	0.003	0.001 * Provisional		0.0008	38 mm Ø x ~7 or 19+ mm
NM 304A	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 25 mm
TL 1000	(0.0093)	0.0293	.	Mg:(0.00005)	.	(0.00106)	0.0011	(0.0033)	(0.0002)	.	.	36 mm Ø x 20 mm
VS RG25	.	.	.	.	.	.	0.039	.	.	.	.	~45 mm Ø x ~28 mm
VS UG124	0.0072	.	.	.	.	.	.	0.0043	.	.	.	~45 mm Ø x ~25 mm
VS UG109	.	.	.	.	.	.	0.071	.	.	.	.	~45 mm Ø x ~25 mm
IARM 213D	(0.008)	(0.0012)	(0.01)	.	(0.0032)	0.0147	0.0011	0.0010	(0.003)	(0.002)	(0.0015)	31 mm Ø x 2 or 18
IMZ 71A	0.0065	0.0100	.	.	0.013	0.015	0.0041	0.055	0.023	.	0.0065	35 mm Ø x 20 mm
SS 456/3	.	0.0113	.	0.0153	0.0222	.	.	0.0214	.	.	.	38 mm Ø x 19 mm
VS UG93	.	.	.	.	.	.	0.075	0.0008	.	.	.	~40 mm Ø x ~28 mm
VS UG122	0.0038	.	.	.	.	.	.	0.0040	.	.	.	~45 mm Ø x ~25 mm
VS UG17/6	.	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm
VS UG120	(0.008)	.	.	.	.	.	.	0.0078	.	.	.	~45 mm Ø x ~25 mm
SS 433/2	.	0.059	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm
DSZU C041a	(0.008)	(0.002)	.	.	.	(0.004)	0.0049	0.0033	(0.003)	.	.	40 mm Ø x 25 mm last
DSZU C041b	0.0073	(0.002)	.	.	.	0.004	0.0070	0.0034	(0.003)	.	.	40 mm Ø x 25 mm
VS UG108	.	.	.	.	.	.	0.071	.	0.074	.	.	~45 mm Ø x ~25 mm
SRM 1228	.	.	.	.	.	.	.	<0.001	.	.	.	32 mm Ø x 19 mm
ECRM 057-2D	0.0023	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 25 or 30 mm
IARM Fe1215-18	0.0109	0.0012	.	.	0.0018	0.0083	0.0007	0.0020	.	.	.	~38 mm Ø x ~3 or ~19 mm
ECRM 083-2D	0.00157	.	.	.	.	.	.	.	.	0.00439	.	39 mm Ø x 28 mm
DSZU C03	.	(0.002)	.	(0.009)	(0.003)	0.011	0.002	0.004	(0.009)	(0.0037)	(0.0006)	40 mm Ø x 30 mm
VS RG26	.	.	.	.	.	.	0.121	.	0.0052	.	.	~45 mm Ø x ~28 mm
SS 431/2	0.0052	0.0040	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm
BS XCAS	0.0055	(0.0015)	0.008	.	0.0006	0.0017	0.0010	0.020	(0.006)	Fe:99.0	.	38 mm Ø x 30 mm **17034**
BS XCCS-2	0.0139	(0.003)	0.0066	.	(0.0016)	(0.0015)	0.011	0.018	0.020	Fe:98.6	.	~37 mm D x ~30 mm **17034**
VS UG2/11	(0.007)	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm
DSZU C040A	0.0068	(0.0003)	.	.	.	(0.0002)	0.0010	(0.001)	(0.002)	.	.	40 mm Ø x 25 mm
BS 1005	0.0044	0.0008	0.0058	(0.0003)	(0.0007)	0.0009	0.0010	(0.0007)	(0.0003)	Fe:99.6	(0.0008)	38 mm Ø x ~7 or 19+ mm **17034**
BS 1009	0.0043	(0.0008)	0.0060	(0.0004)	(0.0009)	0.0007	0.0007	(0.0006)	(0.001)	Fe:99.6	(0.0006)	38 mm Ø x ~7 or 19+ mm **17034**
SS 11171	0.0025	.	.	.	.	0.0006	0.0004	0.0002	.	.	.	44 mm Ø x 19 mm
VS 005/1	.	.	.	.	.	0.0021	0.0048	.	.	.	.	~41 mm Ø x ~22 mm
SS 432/2	0.0066	0.0174	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm
VS 003/1	.	.	.	.	.	0.0019	0.0063	.	.	.	.	~41 mm Ø x ~22 mm
CZ LA-1B	0.003	(0.001)	.	(0.0007)	(0.002)	(0.001)	(0.001)	0.004	0.010	.	(0.002)	~37 mm Ø x 25 mm
IMZ 110A	0.0037	.	.	.	.	.	(0.0006)	(0.0014)	.	.	.	43 mm Ø x 20 mm
VS 004	.	.	.	.	.	.	0.0013	.	.	.	.	~45 mm Ø x ~25 mm
VS 004/1	.	.	.	.	.	(0.002)	0.0012	.	.	.	.	~41 mm Ø x ~22 mm
VS 002	.	.	.	.	.	0.00040	0.0005	.	.	.	.	~45 mm Ø x ~25 mm
VS 002/1	.	.	.	.	.	0.00037	0.00056	.	.	.	.	~41 mm Ø x ~22 mm

Number	N	Nb	O	Pb	Sb	Sn	Ti	V	W	Zn	Zr	Units

ARSENIC AND ANTIMONY IN STEEL, CONTINUED ON THE NEXT PAGE

= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties analysis listed in mass % except * which is mg/kg

#	Number	As	Sb	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	N	Ti	V	W
2	CZ CM-2B	0.12	0.020	0.247	0.894	0.082	0.0114	1.95	0.99	1.20	1.53	0.046	.	0.0062	0.342	0.109	0.22
1	SS 458/2	.	0.089	0.198	0.479	0.0281	0.0314	0.504	.	.	.	0.055	0.053	.	.	0.105	.
1	SS 457/2	.	0.050	0.307	0.327	0.0098	0.0448	0.105	.	.	.	0.088	0.084	.	.	0.153	.
1	12X 12749X	0.081	.	0.176	1.41	0.023	0.066	0.48	0.253	0.47	0.453	0.202	.	.	0.0178	0.068	0.036
1	BS 1763	0.066	(0.019)	0.271	1.50	0.016	0.024	0.68	0.175	0.54	0.560	0.051	.	0.0100	0.30	0.291	<0.05
2	CZ CM-16B	0.065	0.0282	0.421	0.762	0.0508	0.0376	0.574	0.296	0.733	0.635	0.128	.	0.0154	0.121	0.272	0.141
1	IMZ 120	0.065	0.031	0.60	0.40	(0.049)	0.026	0.34	0.10	0.085	0.20	0.033	.	0.0115	.	.	.
1	12X 15266V	0.0640	.	0.455	1.240	0.0344	0.0258	0.674	0.226	1.317	3.49	0.526	.	.	.	0.106	.
1	VS UG146	0.056	.	0.77	2.42	(0.05)	0.028	1.99	0.593	1.39	0.186	0.017	.	0.017	0.075	0.062	0.028
1	IRSID 1656	0.055	.	0.477	0.730	0.027	0.013	0.277	.	(0.048)	(0.017)	(0.002)	.	.	.	(0.002)	.
2	CZ LA-3G	0.051	0.024	0.626	0.68	0.047	0.035	1.29	0.236	1.01	1.377	0.047	.	0.011	0.143	0.232	0.105
1	SRM 1264a	0.05	0.034	0.87	0.25	0.010	0.025	0.067	0.25	0.14	0.06	(0.008)	.	(0.0032)	0.24	0.10	0.10
2	CZ LA-5C	0.026	0.018	0.439	1.87	0.017	0.0088	0.394	0.138	2.59	3.815	0.081	.	0.024	0.048	0.536	0.631
1	IARM 196A	0.025	0.006	1.08	2.40	0.040	0.014	0.35	0.25	0.61	2.35	0.015	.	0.0084	0.014	0.157	0.189
2	CZ CM-6A	0.025	0.03	0.52	0.37	0.016	0.058	0.27	0.05	0.19	0.37	0.02	.	0.009	0.03	0.05	0.04
1	ECRM 087-1D	0.024	0.0046	0.174	0.671	0.010	0.046	0.263	0.171	0.118	0.078	.	.	.	.	.	.
1	IMZ 112A	0.023	0.021	0.212	0.471	0.0055	0.0188	0.257	0.068	0.055	0.099	0.017	.	0.0058	0.0138	0.043	0.072
2	CZ CM-5C	0.020	0.005	1.04	1.17	0.029	0.021	0.54	0.151	0.42	2.45	0.063	.	0.014	0.031	0.106	0.034
1	IRSID 1750	0.0188	0.0031	0.359	1.801	0.0128	0.075	0.246	0.320	0.187	0.227	0.0175	.	0.0107	(0.0016)	0.114	(0.004)
1	ECRM 055-2D	0.0187	0.00376	0.5199	0.687	0.0102	0.0205	0.3094	0.2089	0.3121	0.3217	.	.	0.01069	0.00104	0.00245	0.0166
3	CZ CM-5B	0.018	0.006	1.09	1.28	0.021	0.012	0.39	0.13	0.23	2.07	0.083	.	0.0135	0.02	0.06	0.03
2	CZ CM-14C	0.0165	0.0170	0.586	1.723	0.0169	0.0266	1.352	0.365	1.141	1.316	0.226	.	0.0092	0.420	0.325	0.0238
1	IMZ 71A	0.016	0.013	0.126	0.493	0.0126	0.0075	0.494	0.90	0.036	0.505	0.019	.	0.0065	0.0041	0.055	0.023
2	CZ CM-4B	0.015	0.052	0.72	0.50	0.023	0.012	0.80	0.40	1.40	2.23	0.025	.	0.013	0.12	0.18	0.116
2	CZ CM-23A	0.0146	0.137	0.917	0.803	0.0609	0.0348	0.934	0.234	0.230	3.064	0.323	.	0.0149	0.154	0.157	0.104
1	IRSID 1749	0.0134	0.0018	0.411	0.733	0.0104	0.0157	0.193	0.188	0.190	1.734	1.034	.	0.0066	0.0031	(0.0036)	(<0.0030)
1	BS 30D	0.0128	0.0032	0.745	0.348	0.029	0.0010	0.301	0.116	0.191	3.93	0.0123	.	0.0168	0.0189	1.077	17.73
1	IRSID 1664	0.0115	0.0012	0.2008	0.472	0.0106	0.0259	0.0616	0.0820	0.0547	0.0707	.	0.0193	0.0072	0.0013	(0.0005)	<0.002
1	BS D-6	0.011	0.0012	0.472	0.78	0.007	0.0008	0.228	0.130	0.602	0.99	0.037	.	0.0031	0.0025	0.122	0.0018
1	BS 4340B	0.009	0.0017	0.42	0.658	0.0078	0.016	0.283	0.170	1.85	0.81	0.022	.	0.0060	0.0019	0.0033	(0.0028)
1	VS UG141	0.008	0.011	0.163	0.90	0.029	0.028	0.390	0.190	0.686	0.78	0.011	.	0.0092	0.104	0.294	0.29
1	BS 1982	0.007	0.002	0.128	0.441	0.012	0.026	0.255	0.177	0.197	2.09	0.021	.	0.0097	(0.001)	0.003	.
1	KUT A12	0.007	0.013	0.031	0.31	0.014	0.082	1.19	0.18	2.43	1.25	0.18	.	.	0.05	0.042	.
1	ECRM 268-1D	0.0062	0.0017	1.134	0.293	0.0209	0.0154	0.373	0.123	0.143	4.57	.	.	2.03	.	8.47	3.70
1	IARM 360A	0.0060	0.0023	0.331	0.733	0.008	0.023	0.260	0.235	0.078	0.113	0.0016	.	0.0102	0.0010	0.039	(0.001)

#	Number	As	Sb	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	N	Ti	V	W
1	IARM 209D	0.0060	0.004	0.322	0.68	0.0084	0.021	0.268	0.243	0.079	0.137	(0.003)	.	0.0107	0.0011	0.042	(0.002)
1	BS 4820A	0.006	0.0024	0.203	0.64	0.008	0.014	0.185	0.212	3.28	0.116	0.029	.	0.0076	0.0012	0.0010	(0.002)
1	VS UG142	0.006	0.028	0.107	0.54	0.051	0.012	0.61	0.794	0.129	2.91	0.084	.	0.020	0.0075	0.42	0.83
1	IARM 210D	0.0059	0.002	0.412	0.73	0.0052	0.030	0.230	0.273	0.122	0.096	(0.002)	.	0.011	0.0104	0.024	(0.002)
1	BS 3310	0.0058	0.0019	0.104	0.54	0.0092	0.0144	0.257	0.199	3.49	1.55	0.035	.	0.0075	0.0010	0.0029	(0.003)
1	IMZ 68	0.0057	0.0020	0.102	0.346	0.028	0.015	0.13	0.166	0.049	0.33	.	.	0.0086	0.0033	0.046	.
1	BS 1030	0.0055	0.0024	0.331	0.682	0.0101	0.0299	0.261	0.269	0.078	0.124	0.0014	.	0.0107	0.0005	0.031	0.0012
1	BS 4820B	0.0055	0.0028	0.199	0.67	0.0081	0.0113	0.269	0.221	3.32	0.116	0.038	.	0.0075	0.0013	0.0016	(0.003)
1	VS UG143	0.0054	0.010	1.52	1.41	0.013	0.0039	1.26	0.112	2.61	0.241	0.320	.	0.0057	0.084	0.094	0.48
1	BS 4140C	0.0052	0.0021	0.43	0.922	0.010	0.026	0.29	0.260	0.131	0.94	0.0215	.	0.0064	0.0009	0.0026	(0.003)
1	BS 8740	0.0051	0.0017	0.39	0.86	0.011	0.023	0.25	0.16	0.55	0.49	0.037	.	0.0073	0.0012	0.0024	0.0023
1	BS 1045	0.0050	0.0017	0.458	0.796	0.0069	0.023	0.215	0.190	0.060	0.108	(0.001)	.	0.0113	0.0011	(0.002)	(0.0007)
1	ECRM 129-3D	0.0049	0.00059	0.3684	0.371	0.0110	0.0165	0.2087	0.0804	1.022	1.702	1.016	.	0.0046	0.0030	.	.
1	BS 8620G	0.0049	0.0020	0.215	0.799	0.0094	0.020	0.264	0.191	0.58	0.568	0.027	.	0.0080	0.0011	0.0018	(0.0022)
1	IARM FeF11-21	0.0048	0.0017	0.114	0.530	0.0067	0.0141	0.679	0.123	0.069	1.349	0.018	.	.	0.0015	0.0038	.
1	12X 86200-21	0.0045	0.0024	0.211	0.811	0.0128	0.0224	0.237	0.199	0.551	0.507	0.0241	.	0.0082	.	0.0039	(0.003)
1	VS UG90	0.0044	0.0011	0.34	0.286	0.0079	0.012	0.221	0.200	0.265	0.261	0.037	0.032	0.015	0.039	.	.
1	IARM Fe1020-18	0.0044	0.0018	0.226	0.547	0.006	0.024	0.235	0.198	0.078	0.125	(0.003)	.	0.0098	.	0.036	.
1	VS UG89	0.0043	0.0011	0.92	0.76	0.0085	0.01	0.385	0.373	0.51	0.420	0.01	0.007	0.017	0.012	0.021	.
1	IARM Fe1215-18	0.0043	0.0018	0.043	0.96	0.059	0.29	(0.006)	0.164	0.055	0.051	.	.	0.0109	0.0007	0.0020	.
2	HRT FE2021-N	0.004	0.001	0.33	0.31	0.0178	0.0014	0.28	0.070	0.193	2.81	0.014	.	0.007	0.001	0.52	0.027
1	BS 8630	0.0038	0.0012	0.315	0.752	0.0032	0.0043	0.261	0.046	0.544	0.477	0.023	.	0.0038	0.0008	0.0006	(0.001)
2	BS 56E	0.0035	0.0004	0.483	0.72	0.010	0.025	0.24	0.015	0.015	0.021	0.062	.	0.0056	(0.001)	(<0.002)	.
1	IMZ 114A	0.0035	0.018	0.358	1.156	0.0235	0.0220	0.328	0.492	0.098	0.423	0.027	.	0.0029	0.0088	0.096	(0.007)
1	BS E52100	0.0033	0.0011	0.99	0.371	0.011	0.004	0.270	0.090	0.066	1.54	0.019	.	0.0057	(0.0010)	0.0046	(0.0015)
1	KUT A18	0.003	0.005	1.16	(1.99)	0.014	0.007	0.15	0.066	0.125	0.90	(0.02)	.	.	0.011	0.10	.
1	BS 300A	0.0029	0.0011	0.416	0.716	0.0049	0.0008	1.71	0.118	1.87	0.798	0.098	.	0.0023	0.0095	0.070	<0.01
1	VS UG92	0.0027	0.0005	0.69	0.79	0.05	0.0029	1.98	0.111	0.155	0.200	0.091	0.08	0.016	0.022	0.024	.
1	BS 37G	0.0026	0.0009	1.663	0.326	0.021	0.0007	0.352	0.044	0.152	11.77	0.0060	.	0.0310	0.0025	0.70	0.034
1	BS XCAS	0.0016	0.0006	0.024	0.471	0.008	0.0064	0.339	0.020	0.031	0.035	(0.027)	.	0.0055	0.0010	0.020	(0.006)

#	Number	As	Sb	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	N	Ti	V	W

ARSENIC AND ANTIMONY IN STEEL, CONTINUED FROM THE PREVIOUS PAGE

Number	B	Bi	Ca	Ce	Co	Fe	Mo	Nb	O	Pb	Sn	Ta	Zn	Zr	Units	Comment
CZ CM-2B	0.0010	.	.	.	0.45	.	0.33	(0.58)	.	0.087	0.091	.	.	0.013	~37 mm Ø x ~25 mm	
SS 458/2	0.0069	.	.	.	0.198	.	.	0.0510	.	0.0140	.	.	.	(0.064)	38 mm Ø x 19 mm	
SS 457/2	0.0046	.	.	.	0.0217	.	.	0.0174	.	0.0098	.	.	.	0.025	38 mm Ø x 19 mm	
12X 12749X	.	.	.	.	0.426	.	0.195	.	.	0.016	0.018	.	.	.	~40 mm Ø x ~15 mm	
BS 1763	0.0031	.	<0.05	.	0.124	94.6	0.55	0.141	0.008	0.0026	(0.013)	(0.019)	.	(0.026)	37 mm Ø x 19 or 20 mm	17034
CZ CM-16B	0.0128	(0.045)	0.00033	.	0.058	.	0.424	0.094	.	0.0294	0.0289	.	0.0156	0.102	37 mm Ø x 25 mm	
IMZ 120	.	.	.	.	.	.	.	.	.	0.077	0.008	.	.	.	40 mm Ø x 40 mm	
12X 15266V	.	.	.	.	0.286	.	0.298	1.438	.	.	0.0082	0.116	.	.	~40 mm Ø x ~15 mm	
VS UG146	0.0019	0.0038	0.0023	0.009	0.0128	.	0.271	0.047	.	0.011	.	0.029	0.0098	.	~37 mm Ø x ~20 mm	
IRSID 1656	.	.	.	.	.	.	(0.007)	.	.	.	.	.	.	.	40 mm Ø x 35 mm	
CZ LA-3G	0.0039	.	0.0016	.	0.127	.	0.326	0.071	.	0.0098	0.031	.	.	0.068	~37 mm Ø x ~25 mm	
SRM 1264a	(0.011)	(0.0009)	0.00004	0.0002	0.15	[96.7]	0.49	0.15	(0.0010)	0.024	(0.008)	0.11	(0.001)	0.069	31 mm Ø x 19 mm	
CZ LA-5C	.	.	.	.	0.088	.	0.86	0.057	.	0.015	0.031	.	(0.013)	.	~37 mm Ø x 25 mm	
IARM 196A	0.0017	.	0.0002	.	0.013	.	0.129	0.087	0.0021	0.001	0.033	.	.	0.006	31 mm Ø x 18 mm	
CZ CM-6A	0.015	.	.	.	0.03	.	0.04	0.028	.	0.017	0.017	.	.	0.04	~39 mm Ø x 25 mm	
ECRM 087-1D	.	.	.	.	0.015	.	0.021	.	.	.	0.017	.	.	.	38 mm Ø x 25 or 30 mm	
IMZ 112A	0.0010	.	.	.	0.080	.	0.054	0.0123	.	0.008	0.162	.	0.0020	.	38 mm Ø x 20 mm	
CZ CM-5C	0.0012	.	(0.0006)	.	0.022	.	0.132	0.014	.	0.009	0.018	.	.	(0.07)	~39 mm Ø x 25 mm	
IRSID 1750	(0.0002)	(0.00002)	(0.0002)	(<0.0005)	(0.0120)	.	0.0433	(<0.0010)	.	(<0.001)	0.0137	(<0.0010)	(0.0012)	(0.0002)	38 mm Ø x 25 mm	
ECRM 055-2D	.	.	.	.	0.0257	.	0.0960	.	.	.	0.0162	.	.	.	38 mm Ø x 25 or 30 mm	
CZ CM-5B	0.002	.	.	.	0.022	.	0.10	0.015	.	0.01	0.012	.	.	0.09	~39 mm Ø x 25 mm	
CZ CM-14C	0.0249	.	.	.	0.0306	.	0.432	0.248	.	0.0090	0.048	.	.	0.037	37 mm Ø x 25 mm	
IMZ 71A	0.0009	.	.	.	0.025	.	0.018	0.0100	.	.	0.015	.	.	0.0065	35 mm Ø x 20 mm	
CZ CM-4B	0.017	.	.	.	0.115	.	0.33	0.071	.	0.022	0.028	.	0.007	.	~39 mm Ø x 25 mm	
CZ CM-23A	0.0129	(0.014)	0.0004	.	0.510	.	0.816	0.628	.	0.0034	0.059	(0.051)	0.0250	0.137	37 mm Ø x 25 mm	
IRSID 1749	(<0.0005)	(<0.0002)	(0.0002)	.	0.0141	.	0.257	(<0.0005)	0.0002	(<0.0002)	0.0148	.	(<0.0006)	(<0.0003)	41 mm Ø x 25 mm	
BS 30D	(0.0002)	.	0.0004	.	0.101	[75.0]	0.342	0.0071	0.0019	(0.0002)	0.0246	(0.02)	.	(0.0001)	38 mm Ø x ~7 or 19+ mm	17025
IRSID 1664	(0.0002)	<0.0001	(0.0005)	.	(0.0084)	.	0.0157	(0.0002)	.	0.0002	0.0108	.	(0.0007)	(0.0001)	37 mm Ø x 30 mm	
BS D-6	(0.0003)	.	0.0011	.	0.012	.	1.01	(0.002)	(0.0008)	(0.0003)	0.0104	.	.	.	38 mm Ø x ~7 or 19+ mm	17025
BS 4340B	<0.005	Mg:0.0002	<0.005	.	0.014	95.5	0.235	(0.0021)	0.0009	<0.005	0.008	.	.	(0.0006)	38 mm Ø x ~7 or 19+ mm	17034
VS UG141	0.0099	.	.	(0.02)	0.041	.	0.472	0.099	.	0.0068	0.089	0.031	0.0017	.	~37 mm Ø x ~20 mm	
BS 1982	.	.	.	.	0.010	.	0.89	(<0.003)	0.0017	(0.0003)	0.013	.	.	.	39 mm Ø x ~7 or ~18 mm	last
KUT A12	.	.	.	.	0.012	.	0.47	(0.03)	.	.	.	.	.	.	30-35 mm Ø x 39 mm	
ECRM 268-1D	0.0009	.	.	.	0.0290	.	3.20	.	.	.	0.0078	.	.	.	38 mm Ø x 25 mm	
IARM 360A	0.0004	.	0.0017	.	0.0067	.	0.024	0.0015	0.004	(0.001)	0.010	.	(0.003)	(0.001)	31 mm Ø x 2 or 18 mm	

Number	B	Bi	Ca	Ce	Co	Fe	Mo	Nb	O	Pb	Sn	Ta	Zn	Zr	Units	Comment
IARM 209D	0.0002	.	0.002	.	0.007	.	0.037	0.0014	0.005	0.001	0.012	.	(0.003)	.	31 mm Ø x 2 or 18 mm	
BS 4820A	0.0002	.	0.0003	.	0.008	.	0.203	(0.002)	0.0011	(0.0002)	0.0097	.	.	.	38 mm Ø x ~7 or 19+ mm	17025
VS UG142	.	0.012	0.0010	(0.04)	0.087	.	0.80	0.049	.	0.041	0.0126	.	0.0057	.	~37 mm Ø x ~20 mm	
IARM 210D	0.0004	.	0.0009	.	0.007	.	0.034	0.001	0.0034	0.001	0.010	.	.	(0.001)	31 mm Ø x 2 or 18 mm	
BS 3310	(0.0008)	.	(0.001)	.	0.0096	93.7	(0.052)	(0.0009)	(0.0008)	(0.0005)	0.0103	0.007	.	(0.001)	44 mm Ø x ~7 or 19+ mm	17034
IMZ 68	.	.	.	.	0.008	.	.	.	.	.	0.0066	.	.	.	38 mm Ø x 20 mm	
BS 1030	0.0003	.	0.0012	.	0.0069	(98.1)	0.0182	(0.0004)	0.005	0.0005	0.0114	(0.001)	.	(0.0002)	38 mm Ø x ~7 mm	17025, last
BS 4820B	(0.0003)	.	0.0004	.	0.012	94.8	0.251	0.0022	(0.0015)	(0.0003)	0.0098	(0.0020)	.	0.0017	38 mm Ø x ~7 or 19+ mm	17034
VS UG143	0.0010	0.008	0.0015	0.019	0.0171	.	0.046	0.014	.	0.0074	0.059	.	0.013	0.198	~37 mm Ø x ~20 mm	
BS 4140C	(0.0007)	.	0.0010	.	0.0078	96.8	0.169	0.0019	0.0011	(0.0006)	0.0095	(0.01)	.	(0.0009)	38 mm Ø x ~7 or 19+ mm	17034
BS 8740	0.0003	.	(0.0003)	.	0.0086	96.91	0.27	(0.0007)	(0.001)	(0.0003)	0.008	(0.003)	.	(0.001)	38 mm Ø x ~7 or 19+ mm	17034
BS 1045	(0.0003)	.	0.0013	.	0.0056	98.1	0.0170	0.026	0.0040	(0.0005)	0.0084	.	.	(0.0009)	38 mm Ø x ~7 or 19+ mm	17034
ECRM 129-3D	.	.	.	.	0.0148	.	0.206	.	.	.	0.0067	.	(0.0030)	.	39 mm Ø x 25 mm	
BS 8620G	0.0002	.	0.0015	.	0.0077	97.1	0.205	0.0020	0.0032	<0.005	0.0095	<0.0005	<0.005	(0.0007)	38 mm Ø x ~7-or 19+ mm	17034
IARM FeF11-21	0.0004	.	.	.	0.0062	.	0.614	.	.	.	0.0084	.	.	.	38 mm Ø x 2 or 19 mm	
12X 86200-21	.	.	.	.	0.0072	.	0.190	0.0014	.	.	0.0094	.	.	(0.0014)	38 mm Ø x 19 mm	
VS UG90	.	.	.	.	.	.	0.046	.	.	.	.	.	.	.	~47 mm Ø x ~30 mm	
IARM Fe1020-18	.	.	(0.002)	.	0.0065	98.5	0.0252	(0.0012)	(0.007)	.	0.0080	(0.003)	(0.003)	.	31 mm Ø x 2 or 18 mm	
VS UG89	.	.	.	.	.	.	0.044	0.0043	.	0.0003	.	.	.	.	~47 mm Ø x ~30 mm	
IARM Fe1215-18	.	.	.	.	0.0055	.	0.016	0.0012	.	.	0.0083	.	.	.	~38 mm Ø x ~3 or ~19 mm	
HRT FE2021-N	0.0006	.	.	0.0011	0.011	.	2.7	0.007	.	.	0.004	0.002	0.002	0.0012	36 mm Ø x 20 mm	
BS 8630	(0.0002)	.	(0.0007)	.	0.0029	97.3	0.194	(0.0006)	0.0008	(0.0007)	0.0029	.	.	(0.001)	44 mm Ø x 19+ mm	17034
BS 56E	.	.	(<0.0005)	.	0.005	.	0.005	(<0.002)	.	(0.0001)	(0.0006)	.	.	.	44 mm Ø X ~13 to ~18 mm	last
IMZ 114A	0.0019	.	.	.	0.0057	.	0.112	0.015	.	0.021	0.014	.	(0.006)	.	38 mm Ø x 20 mm	
BS E52100	.	.	0.0006	.	0.0067	96.6	0.0209	(0.0010)	0.0009	<0.0005	0.0049	.	.	<0.005	38 mm Ø x ~7 or 19+ mm	17034
KUT A18	(0.011)	.	.	.	.	.	.	0.035	.	.	0.016	.	.	.	30-35 mm Ø x 39 mm	
BS 300A	(0.00032)	.	0.0008	.	0.0087	93.8	0.38	(0.002)	<0.01	<0.0005	0.0065	0.0022	.	(0.002)	38 mm Ø x ~7 or 19+ mm	17034
VS UG92	.	.	.	.	.	.	0.119	0.034	.	0.00017	.	.	.	.	~47 mm Ø x ~30 mm	
BS 37G	0.0003	.	0.0014	.	0.0166	.	0.78	0.0026	.	0.0005	0.0010	.	.	.	34 mm Ø x 19 mm	
BS XCAS	(0.0002)	.	<0.005	.	0.0086	99.0	0.0069	(0.0015)	0.008	(0.0007)	0.0017	.	.	(0.0009)	38 mm Ø x 30 mm	17034

Number B Bi Ca Ce Co Fe Mo Nb O Pb Sn Ta Zn Zr Units Comment

BISMUTH STEEL

= Class, where 1 = CRM and 2 = RM

#	Number	Bi	C	Mn	P	S	Si	Cu	Ni	Cr	Al	As	Ca	Co	Mo	N	Ti	V
2	BS 53MOD	0.102	1.01	0.36	0.011	0.012	0.26	0.070	0.072	1.37	0.019	0.004	(0.001)	0.007	0.024	0.0086	.	0.005
2	BS 8620A	0.073	0.184	0.80	0.008	0.079	0.21	0.15	0.44	0.48	0.016	0.007	0.0003	0.010	0.16	0.0107	(0.002)	0.004
2	BS 4150MOD	0.070	0.47	0.90	0.024	0.079	0.21	0.19	0.15	1.01	0.012	0.005	0.0010	0.012	0.21	0.0087	(0.002)	0.008
1	VS UG142	0.012	0.107	0.54	0.051	0.012	0.61	0.794	0.129	2.91	0.084	0.006	0.0010	0.087	0.80	0.020	0.0075	0.42
1	VS UG127	0.011	0.962	0.93	0.020	0.029	0.427	0.145	0.151	0.188	0.0051	.	.	.	.	0.0155	0.0094	0.141
1	VS UG143	0.008	1.52	1.41	0.013	0.0039	1.26	0.112	2.61	0.241	0.320	0.0054	0.0015	0.0171	0.046	0.0057	0.084	0.094
1	VS UG126	0.0055	0.856	0.78	0.0128	0.0077	0.348	0.030	0.029	0.591	0.0015	.	.	.	.	0.0123	.	0.075
1	VS UG145	0.0052	0.312	0.220	0.0066	0.059	0.164	0.307	0.453	1.10	0.009	0.034	0.0006	0.161	1.34	0.012	0.020	0.68
1	VS UG146	0.0038	0.77	2.42	(0.05)	0.028	1.99	0.593	1.39	0.186	0.017	0.056	0.0023	0.0128	0.271	0.017	0.075	0.062

Number	B	Ce	Nb	O	Pb	Sb	Se	Sn	Ta	W	Zn	Zr	Units	Comment
BS 53MOD	.	.	.	(0.002)	0.0005	.	.	0.008	.	.	.	.	38 mm Ø x ~12 to 19 mm	last
BS 8620A	.	.	.	(0.004)	(0.001)	.	.	0.009	.	.	.	.	38 mm Ø x ~7 mm	last
BS 4150MOD	.	.	.	(0.003)	0.0010	.	.	0.013	.	.	.	.	38 mm Ø x ~7 mm	last
VS UG142	.	(0.04)	0.049	.	0.041	0.028	.	0.0126	.	0.83	0.0057	.	~37 mm Ø x ~20 mm	
VS UG127	.	.	.	.	0.0049	.	.	.	.	.	.	.	~38 mm Ø x ~20 mm	
VS UG143	0.0010	0.019	0.014	.	0.0074	0.010	.	0.059	.	0.48	0.013	0.198	~37 mm Ø x ~20 mm	
VS UG126	.	.	.	.	0.009	.	.	.	.	.	.	.	~38 mm Ø x ~20 mm	
VS UG145	0.0019	(0.02)	0.102	.	0.021	.	.	0.0072	(0.01)	0.162	0.0017	0.008	~37 mm Ø x ~20 mm	
VS UG146	0.0019	0.009	0.047	.	0.011	.	.	.	0.029	0.028	0.0098	.	~37 mm Ø x ~20 mm	

CALCIUM IN STEEL

= Class, where 1 = CRM and 2 = RM

#	Number	Ca	C	Mn	P	S	Si	Cu	Ni	Cr	Al	As	Co	Mo	N	Ti	V	W
1	BS HiCal-1	0.0140	0.271	1.00	(0.007)	0.0007	1.29	0.152	3.28	1.55	0.070	0.0022	0.0024	0.379	.	0.0037	0.0027	(0.0009)
1	SS 115	0.0058	0.6224	0.682	0.0123	0.00093	0.2078	.	0.0196	0.0198	0.0527	.	.	.	0.0067	0.0027	.	.
2	BS 9325	0.0049	0.25	0.91	0.008	0.007	0.32	0.13	3.29	1.48	0.030	0.004	0.010	0.31	0.0089	.	0.004	.
2	BS 4820	0.0046	0.188	0.57	0.010	0.025	0.25	0.11	3.29	0.12	0.020	0.005	0.008	0.21	0.0079	.	(0.002)	.
1	SS 116	0.0036	0.617	0.6756	0.0092	0.00176	0.201	.	0.0155	0.0141	0.0587	.	.	.	0.0069	0.00171	.	.
1	12X 605M36A	0.0033	0.373	1.504	(0.009)	0.0317	0.283	0.199	0.146	0.243	0.0105	0.0102	0.0151	0.292	0.0095	.	.	.
1	BS 1009	0.0033	0.008	0.212	0.0118	0.0086	0.048	0.011	0.0129	0.028	0.026	0.0011	0.0020	(0.003)	0.0043	0.0007	(0.0006)	(0.001)
1	BS XCCS-2	0.0032	0.021	0.58	0.0055	0.0059	0.40	0.047	0.099	0.039	0.073	(0.004)	0.016	0.013	0.0139	0.011	0.018	0.020
1	IMZ 139	0.0031	.	.	.	.	.	.	.	.	(0.029)	.	.	.	0.0113	.	.	.
1	BS 1026A	0.0025	0.270	0.76	0.0064	0.021	0.180	0.094	0.081	0.123	0.0091	(0.005)	(0.005)	0.053	0.0100	(0.0006)	0.0257	0.0009
1	IMZ 130	0.0024	.	.	.	.	.	.	.	.	0.0046	.	.	.	0.0153	.	.	.
1	VS UG146	0.0023	0.77	2.42	(0.05)	0.028	1.99	0.593	1.39	0.186	0.017	0.056	0.0128	0.271	0.017	0.075	0.062	0.028
1	DSZU C047A	0.0022	0.789	0.411	0.022	0.0107	1.94	0.150	0.311	4.76	0.054	(0.0095)	0.105	0.76	0.022	0.0096	1.21	2.37
1	BS 1020	0.0022	0.210	0.568	0.0058	0.0249	0.250	0.184	0.059	0.109	0.0006	0.0074	0.0070	0.018	0.0109	(0.0005)	0.0363	(0.0004)
1	DSZU C040A	0.0021	0.013	0.012	0.0023	0.0029	0.060	0.007	0.005	0.007	0.039	(0.0002)	(0.002)	(0.001)	0.0068	0.0010	(0.001)	(0.002)
2	HRT FE2009-N	0.0020	0.12	0.55	0.010	0.003	0.32	0.08	0.25	2.56	0.030	.	.	1.02	.	.	0.015	.
1	IARM 209D	0.002	0.322	0.68	0.0084	0.021	0.268	0.243	0.079	0.137	(0.003)	0.0060	0.007	0.037	0.0107	0.0011	0.042	(0.002)

Number	B	Bi	Ce	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units	Comment
BS HiCal-1	(0.0001)	.	.	[91.9]	(0.0003)	(0.002)	.	(0.0005)	.	(0.0002)	.	.	(0.0008)	~38 mm Ø x ~30 mm	17025
SS 115	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
BS 9325	.	.	.	.	.	.	0.0010	.	.	0.009	.	.	.	38 mm Ø x ~7 mm	last
BS 4820	.	.	.	.	.	.	0.0027	.	.	(0.008)	.	.	.	38 mm Ø x ~7 mm	
SS 116	.	.	.	.	.	.	.	0.00012	.	.	.	.	.	44 mm Ø x 19 mm	
12X 605M36A	.	.	.	.	.	.	.	.	.	0.0101	.	.	.	~38 mm Ø x ~15 mm	
BS 1009	(0.0002)	.	.	99.6	(0.0003)	(0.0008)	0.0060	(0.0004)	(0.0009)	0.0007	.	.	(0.0006)	38 mm Ø x ~7 or 19+ mm	17034
BS XCCS-2	0.021	.	.	98.6	0.0003	(0.003)	0.0066	(0.0004)	(0.0016)	(0.0015)	(0.023)	(0.008)	(0.0015)	~37 mm D x ~30 mm	17034
IMZ 139	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
BS 1026A	(0.0003)	.	.	98.3	<0.001	0.0008	0.0042	<0.005	0.0013	0.0068	<0.1	(0.008)	0.0011	38 mm Ø x ~7 or 19+ mm	17034
IMZ 130	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
VS UG146	0.0019	0.0038	0.009	.	.	0.047	.	0.011	.	.	0.029	0.0098	.	~37 mm Ø x ~20 mm	
DSZU C047A	0.0006	.	.	.	.	0.020	.	.	.	0.0104	.	.	.	40 mm Ø x 25 mm	
BS 1020	(0.0001)	.	.	[98.5]	(0.0001)	(0.0003)	0.0046	(0.0002)	(0.0018)	0.0090	.	.	(0.0005)	44 mm Ø x ~7 or 19+ mm	17025
DSZU C040A	0.00032	.	.	.	.	(0.0003)	.	.	.	(0.0002)	.	.	.	40 mm Ø x 25 mm	
HRT FE2009-N	.	.	.	.	.	.	.	.	.	.	.	0.004	.	40 mm Ø x 40 mm	
IARM 209D	0.0002	.	.	.	.	0.0014	0.005	0.001	0.004	0.012	.	(0.003)	.	31 mm Ø x 2 or 18 mm	

CRM Al, Ca, AND N IN LOW ALLOY STEEL

Number	Al	Ca	N	Units
IMZ 133	.	.	**0.0360**	40 mm Ø x 40 mm
IMZ 131	0.0043	.	**0.0333**	40 mm Ø x 40 mm
IMZ 135	0.0274	0.0008	**0.0238**	40 mm Ø x 40 mm
IMZ 169	0.075	.	**0.0193**	40 mm Ø x 40 mm
IMZ 141	0.0071	.	**0.0154**	40 mm Ø x 40 mm
IMZ 130	0.0046	0.0024	**0.0153**	40 mm Ø x 40 mm
IMZ 139	(0.029)	0.0031	**0.0113**	40 mm Ø x 40 mm
IMZ 132	0.0021	0.0002	**0.0097**	40 mm Ø x 40 mm
IMZ 137	0.0017	0.00025	**0.0083**	40 mm Ø x 40 mm
IMZ 140	0.0307	0.0015	**0.0083**	40 mm Ø x 40 mm
IMZ 138	0.0022	.	**0.0063**	40 mm Ø x 40 mm
IMZ 134	0.0124	0.0005	.	40 mm Ø x 40 mm
IMZ 136	0.0034	0.00031	.	40 mm Ø x 40 mm

RM CERIUM BINARY

analysis listed in mass % 40 mm Ø x 25-30 mm

Number	Ce	Number	Ce
DSZU SU 604	0.496	DSZU SU 58	0.02
DSZU SU 603	0.198	DSZU SU 57	0.011
DSZU SU 60	0.097	DSZU SU 602	0.005
DSZU SU 59	0.05	DSZU SU 601	0.002

C-Mo and Cr-Mo STEEL XRF SET

= class, where 1 = CRM ISO 17025 and 2 = RM, Set Part Number: BS MOLY-5 AVAILABLE INDIVIDUALLY ~7 mm discs

#	Grade	Alloy	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	Co	N	Sn	V	
2	C-.5Mo	4419	BS 3952	0.208	0.546	0.011	0.021	0.264	0.202	0.112	0.105	0.519	0.048	.	(0.0005)	.	.	
1	1.25Cr-.5Mo	F-11	**BS 45B**	0.140	0.502	0.0068	0.017	0.583	0.101	0.136	1.14	0.60	0.030	0.0090	0.0066	0.0069	0.0083	**17034**
1	2.25Cr-1Mo	F-22	**BS 46B**	0.126	0.472	0.0087	0.0187	0.219	0.128	0.081	2.28	1.00	0.020	0.0074	0.0100	0.0073	0.0073	
2	5Cr-.5Mo	F-5	BS 47A	0.130	0.44	0.017	0.015	0.27	0.11	0.12	4.22	0.47	0.015	0.011	0.018	0.008	0.016	
1	9Cr-1Mo	F-9	**BS 48B**	0.110	0.365	0.0228	0.0068	0.75	0.070	0.165	8.78	0.949	0.0157	0.0165	0.0088	0.0049	0.033	

CRM EPMA SETS

available in sets only, as grouped 4x10x15mm

Number	Cr	Number	Ni
NMIJ 1001-a	5.00	NMIJ 1006-a	5.04
NMIJ 1002-a	14.96	NMIJ 1007-a	10.05
NMIJ 1003-a	19.87	NMIJ 1008-a	20.02
NMIJ 1004-a	29.84	NMIJ 1009-a	39.92
NMIJ 1005-a	39.69	NMIJ 1010-a	60.07

Cr-Mo STEEL (Cr > 0.99, Mo > 0.44) CHART 1 or 3

= Class, where 1 = CRM and 2 = RM

#	Number	Cr	Mo	C	Mn	P	S	Si	Cu	Ni	Al	As	Co	N	Sn	Ti	V	W
1	DSZU C082	12.24	1.11	2.32	0.33	0.029	0.014	0.36	0.118	0.239	.	.	0.035	.	.	.	4.02	0.17
2	HRT FE2019-H	11.89	0.86	1.54	0.39	0.025	(0.003)	0.51	0.08	0.14	0.015	.	.	.	.	0.012	0.80	.
1	BS 37G	11.77	0.78	1.663	0.326	0.021	0.0007	0.352	0.044	0.152	0.0060	0.0026	0.0166	0.0310	0.0010	0.0025	0.70	0.034
1	BS 37H *	11.7	0.79	1.56	0.30	0.027	0.001	0.31	0.20	0.35	0.010	0.003	0.020	0.030	0.004	0.002	0.61	0.028
2	BS 37E	11.54	0.79	1.51	0.29	0.024	0.002	0.37	0.053	0.34	0.002	0.002	0.021	0.052	0.003	0.002	0.78	0.021
1	IARM 41D	11.5	0.74	1.519	0.256	0.021	0.012	0.256	0.047	0.114	0.014	(0.01)	(0.020)	0.0152	(0.005)	(0.003)	0.77	0.034
2	CT D2	11.46	0.75	1.53	0.48	0.013	0.005	0.40	0.04	0.10	.	.	0.02	.	.	.	0.89	<0.01
1	IMZ 171	11.44	1.23	0.195	0.42	0.020	0.014	0.21	0.116	0.59	0.036	.	0.024	0.057	0.008	(0.001)	0.26	.
2	BS 37D	11.07	1.09	1.54	0.28	0.021	0.015	0.29	0.063	0.21	.	.	0.07	0.016	0.004	.	0.80	0.16
1	IMZ 196	11.04	0.65	0.179	0.42	0.018	0.012	0.46	0.080	0.44	0.029	.	1.55	0.058	.	.	0.34	1.54
1	VS LG37/1	10.10	0.66	0.121	0.444	(0.02)	(0.01)	0.360	(0.13)	0.704	.	.	.	.	.	.	0.385	.
2	CZ CM-17A	9.58	1.116	0.142	0.524	0.0310	0.0175	0.612	0.201	0.520	0.0089	0.0105	0.0329	0.0743	0.0109	0.0236	0.247	0.099
1	IMZ 157	9.51	0.71	0.095	0.63	0.015	0.010	0.59	0.066	0.50	0.26	.	.	0.051	.	0.044	0.26	.
1	IARM FeP92-18	9.4	0.52	0.092	0.737	(0.005)	(0.005)	0.20	0.074	0.82	(0.005)	.	0.036	(0.0036)	(0.006)	(0.003)	0.188	1.97
1	IMZ 170	8.82	0.88	0.155	0.50	0.018	0.014	0.32	0.285	0.63	0.11	.	(0.022)	0.065	0.007	(0.002)	0.24	(0.19)
1	BS 48B	8.78	0.949	0.110	0.365	0.0228	0.0068	0.75	0.070	0.165	0.0157	0.0048	0.0165	0.0088	0.0049	0.0031	0.033	0.026
1	BS 9905A	8.75	0.95	0.113	0.465	0.0133	0.0040	0.34	0.091	0.152	0.0186	0.0065	0.0136	0.034	0.0060	0.0023	0.216	0.0024
2	HRT FE2003-H	8.66	0.93	0.104	0.46	0.013	0.002	0.43	0.05	0.26	(0.004)	.	0.013	.	.	.	0.217	.
1	13X 90901A	8.43	0.905	0.102	0.447	0.0148	0.0009	0.429	0.039	0.249	0.021	.	.	0.0472	0.0020	(0.0025)	0.208	0.009
1	IARM Fe91-18	8.24	0.94	0.099	0.453	0.015	(0.002)	0.27	0.041	0.187	(0.006)	.	0.013	0.046	(0.004)	(0.0021)	0.198	(0.003)
1	ECRM 274-1D	8.036	1.4551	1.563	0.397	0.0148	0.0096	1.057	0.0281	0.077	(0.0025T)	(0.0013)	(0.0230)	0.0769	(0.0010)	(0.0011)	4.010	0.0087
1	DSZU C081	7.78	2.13	1.01	0.32	0.017	0.011	1.10	0.124	0.207	.	.	0.029	.	.	.	0.25	0.05
1	DSZU C076	5.75	4.29	0.69	0.18	0.024	0.022	0.58	0.120	0.213	.	.	13.88	.	.	.	2.03	9.81
1	DSZU C070	5.57	1.28	2.43	0.38	0.021	0.054	0.79	0.130	0.153	.	.	0.053	.	.	.	9.39	0.29
1	IMZ 173	5.52	1.50	0.30	0.43	0.029	0.020	1.15	0.32	0.42	0.060	.	(0.013)	0.0342	0.012	(0.002)	0.47	0.10
1	IARM Fe15V-18	5.5	1.24	3.51	0.39	0.022	0.010	0.89	0.084	0.123	.	.	0.018	.	0.0054	0.0027	15.6	0.080
2	BS 10V	5.41	1.30	2.46	0.52	0.019	0.079	0.89	0.076	0.08	(<0.002)	.	0.009	0.064	.	.	9.50	0.013
1	BS PM15	5.33	1.22	3.54	0.416	0.0198	0.0127	0.912	0.142	0.203	0.0025	0.0040	0.0330	0.111	0.0034	0.0029	14.79	0.109
2	BS 36D	5.25	0.96	0.97	0.68	0.021	0.007	0.27	0.060	0.089	0.010	0.002	0.010	0.0108	0.016	.	0.29	0.028
2	CT H13	5.23	1.36	0.39	0.30	0.015	0.005	1.05	0.061	0.10	.	.	.	.	.	.	1.02	.
1	BS A-11	5.21	1.25	2.42	0.507	0.023	0.123	0.98	0.092	0.25	0.0054	0.0057	0.044	0.110	0.0055	0.0019	9.24	(0.080)
2	BS 34D	5.15	1.24	0.395	0.38	0.017	0.005	1.06	0.049	0.10	.	.	0.031	.	.	.	0.94	0.10
2	CT A2	5.13	1.05	0.95	0.72	0.010	0.004	0.40	0.06	0.10	.	.	.	.	.	.	0.22	.
1	BS H-13A	5.11	1.32	0.391	0.445	0.0187	(0.003)	1.13	0.083	0.139	(0.03)	0.0050	0.033	0.034	(0.005)	(0.03)	0.92	0.100
1	IMZ 174	5.10	1.24	0.33	0.32	0.029	0.023	0.93	0.17	0.13	0.080	.	0.011	0.0288	0.010	(0.001)	0.98	0.021
1	VS LG42/1	5.08	0.52	0.124	0.41	(0.02)	(0.008)	0.46	(0.16)	0.37	.	.	.	.	.	.	0.020	.
2	BS TH11	5.04	1.27	0.423	0.31	0.016	0.005	0.88	0.041	0.11	.	.	(0.008)	.	.	.	0.46	(0.01)
2	BS TH12	5.02	1.41	0.372	0.40	0.020	0.005	0.92	0.064	0.16	.	.	0.07	.	.	.	0.62	1.06
2	BS 36C	5.01	0.99	0.96	0.46	0.023	0.027	0.31	0.18	0.19	.	.	0.03	.	.	.	0.11	(0.04)
1	ECRM 271-1D	5.002	1.247	0.3698	0.437	0.0120	0.00045	0.923	0.1371	0.1552	0.0234	0.0057	0.0139	0.0137	0.0084	0.0020	0.850	0.0054
1	IARM 39C	4.99	0.97	0.99	0.45	0.019	0.007	0.28	0.077	0.144	0.017	(0.005)	0.013	0.011	0.005	0.0029	0.21	0.011
1	ECRM 276-2D	4.975	1.134	0.399	0.365	0.0093	0.0189	1.034	0.183	0.203	.	.	.	0.0116	0.0133	.	0.296	.
1	BS 36E *	4.91	0.99	0.98	0.55	0.019	0.002	0.27	0.052	0.14	0.014	<0.005	0.014	0.009	0.007	0.003	0.20	0.015
1	IARM 42C	4.86	1.29	0.382	0.40	0.022	0.0037	0.85	0.066	0.051	0.018	(0.01)	0.022	0.0201	(0.006)	0.0125	0.84	0.32
1	IARM 255A	4.84	1.33	0.403	0.27	0.013	0.0012	0.93	0.049	0.083	0.01	(0.002)	0.009	0.0067	0.006	0.002	0.43	0.007
1	IARM 255B	4.82	1.30	0.389	0.317	0.010	(0.002)	0.91	0.073	0.062	0.032	.	0.0090	(0.005)	(0.006)	.	0.515	.
1	IARM 39B	4.79	1.01	0.99	0.54	0.017	0.003	0.35	0.10	0.14	0.006	.	0.014	0.0096	0.004	0.003	0.22	(0.026)

#	Number	Cr	Mo	C	Mn	P	S	Si	Cu	Ni	Al	As	Co	N	Sn	Ti	V	W

Number	B	Ca	Ce	Fe	La	Mg	Nb	O	Pb	Sb	Ta	Zn	Zr	Units	Comment
DSZU C082	.	.	.	.	.	.	.	.	.	.	.	.	.	35 mm Ø x 25 mm	
HRT FE2019-H	.	.	.	.	.	.	0.071	.	.	.	.	.	.	40 mm Ø x 20 mm	
BS 37G	0.0003	0.0014	.	.	.	.	0.0026	.	0.0005	0.0009	.	.	.	34 mm Ø x 19 mm	last
BS 37H *	<0.005	<0.005	.	84.0	.	<0.005	0.004	0.001	<0.005	0.001	.	.	0.001	38 mm Ø x ~7 or 19+ mm *	Provisional
BS 37E	(0.001)	.	.	.	.	.	(0.003)	(0.0025)	(0.0005)	(<0.002)	.	.	.	41 mm Ø x 19 mm	last
IARM 41D	(0.0006)	(0.0008)	.	.	.	.	(0.004)	(0.003)	(0.0008)	.	.	.	(0.002)	31 mm Ø x 2 or 18 mm	
CT D2	.	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 16 mm	
IMZ 171	.	.	.	.	.	.	.	.	.	(0.003)	.	.	.	40 mm Ø x 40 mm	
BS 37D	.	.	.	.	.	.	.	0.0031	.	.	.	.	.	37 mm Ø x 7 or 19+ mm	
IMZ 196	0.065	.	.	.	.	.	0.073	.	.	.	.	.	.	37 mm Ø x 30 mm	
VS LG37/1	.	.	.	.	.	.	.	.	.	.	.	.	.	45 mm Ø x 28 mm	
CZ CM-17A	0.0060	.	.	.	.	.	.	.	0.0177	.	.	.	.	37 mm Ø x 25 mm	
IMZ 157	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
IARM FeP92-18	0.0026	.	.	.	.	.	0.096	(0.013)	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
IMZ 170	.	.	.	.	.	.	0.087	.	.	(0.002)	.	.	.	40 mm Ø x 40 mm	
BS 48B	(0.0002)	(0.003)	.	88.7	.	(0.0002)	(0.001)	0.0022	(0.0002)	(0.001)	.	(0.0003)	(0.002)	38 mm Ø x 7 or 19+ mm	17025
BS 9905A	(0.0005)	(0.0002)	.	88.9	.	(0.0004)	0.074	0.0024	(0.002)	(0.003)	(0.01)	.	(0.002)	38 mm Ø x 7 or 19+ mm	17025
HRT FE2003-H	0.0004	.	.	.	.	.	0.064	.	.	.	.	.	.	40 mm Ø x 20 mm	
13X 90901A	.	.	.	.	.	.	0.070	.	.	.	.	.	.	40 mm Ø x 15 mm	
IARM Fe91-18	.	.	.	.	.	.	0.070	(0.003)	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
ECRM 274-1D	(0.0005)	.	.	.	.	.	.	(0.0026)	.	(0.0002)	.	.	.	38 mm Ø x 25 mm	
DSZU C081	.	.	.	.	.	.	.	.	.	.	.	.	.	35 mm Ø x 25 mm	
DSZU C076	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
DSZU C070	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
IMZ 173	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
IARM Fe15V-18	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 2 or 19 mm	
BS 10V	.	.	.	.	.	.	.	.	.	.	.	.	.	41 mm Ø x 7 or 19+ mm	
BS PM15	(0.0002)	(0.0001)	.	[73.0]	.	(0.0002)	0.014	0.0129	(0.00001)	(0.0010)	(0.0003)	.	(0.0005)	38 mm Ø x 19+ mm	17025
BS 36D	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 7 or 19+ mm	
CT H13	.	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 16 mm	
BS A-11	0.0008	(0.0002)	.	79.5	.	(0.0005)	(0.0070)	0.028	(0.00006)	(0.001)	.	.	(0.001)	38 mm Ø x 7 or 19+ mm	17025
BS 34D	.	.	.	.	.	.	.	.	.	.	.	.	.	41 mm Ø x 7 mm	last
CT A2	.	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 16 mm	
BS H-13A	(0.0007)	(0.0006)	.	90.2	.	(0.0002)	0.0052	(0.016)	(0.0004)	(0.002)	.	.	(0.002)	38 mm Ø x 7 or 19+ mm	17034
IMZ 174	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
VS LG42/1	.	.	.	.	.	.	.	.	.	.	.	.	.	45 mm Ø x 28 mm	
BS TH11	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 7 or 19+ mm	
BS TH12	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 7 mm	last
BS 36C	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 7 or 19+ mm	
ECRM 271-1D	.	0.0009	.	.	.	.	.	0.0020	.	.	.	.	.	35 mm Ø x 25 mm	
IARM 39C	0.001	(0.001)	.	.	.	.	0.0040	0.001	(0.0001)	(0.002)	.	.	(0.002)	31 mm Ø x 2 or 18 mm	
ECRM 276-2D	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 25 or 30 mm	
BS 36E *	<0.005	<0.005	.	91.8	.	.	0.003	0.001	<0.005	0.003	0.007	.	0.001	38 mm Ø x ~7 or 19+ mm *	Provisional
IARM 42C	0.0011	(0.0005)	.	.	.	.	(0.004)	0.003	0.0007	(0.004)	(0.004)	(0.008)	(0.002)	31 mm Ø x 2 or 18 mm	
IARM 255A	0.0004	(0.0004)	.	.	.	.	0.004	0.0011	<0.001	.	.	.	<0.005	31 mm Ø x 2 mm	
IARM 255B	.	.	.	.	.	.	(0.006)	.	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
IARM 39B	.	.	.	.	.	.	0.006	.	.	.	.	.	.	31 mm Ø x 2 or 18 mm	

Number	B	Ca	Ce	Fe	La	Mg	Nb	O	Pb	Sb	Ta	Zn	Zr	Units	Comment

Cr-Mo STEEL (Cr > 0.99, Mo > 0.44) CHART 2 or 3

1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	Cr	Mo	C	Mn	P	S	Si	Cu	Ni	Al	As	Co	N	Sn	Ti	V	W
2	BS 47B	4.78	0.45	0.122	0.39	0.014	0.022	0.22	0.12	0.105	0.018	0.004	.	0.023	0.006	.	0.004	.
2	DSZU C047A	4.76	0.76	0.789	0.411	0.022	0.0107	1.94	0.150	0.311	0.054	(0.0095)	0.105	0.022	0.0104	0.0096	1.21	2.37
1	ECRM 268-1D	4.57	3.20	1.134	0.293	0.0209	0.0154	0.373	0.123	0.143	.	0.0062	0.0290	2.03	0.0078	.	8.47	3.70
1	SS 486/1	4.54	5.20	0.74	0.21	0.029	0.021	0.27	.	(0.06)	(0.005)	(0.016)	0.08	.	0.014	.	1.82	5.80
1	IMZ 172	4.47	0.96	1.03	0.71	0.018	0.047	0.21	0.128	0.12	0.062	.	0.012	0.0192	0.010	(0.002)	0.20	0.011
1	SRM 1157	4.36	4.86	0.836	0.34	0.011	0.004	0.18	0.088	0.228	.	.	0.028	.	.	.	1.82	6.28
1	IARM 37C	4.34	0.500	0.096	0.408	0.014	(0.004)	0.31	0.121	0.148	(0.010)	(0.009)	0.015	0.008	0.009	(0.0025)	0.017	(0.012)
1	BS M-50	4.28	4.29	0.834	0.244	0.0066	0.0009	(0.205)	0.064	0.074	0.073	0.0035	0.0151	0.0057	0.0045	(0.0018)	0.99	0.0052
1	DSZU C072	4.25	5.39	1.30	0.29	0.024	0.019	0.55	0.106	0.192	.	.	0.011	.	.	.	3.59	6.33
1	IARM FeM2-18	4.23	4.92	0.853	0.337	0.025	(0.0010)	0.26	0.098	0.182	(0.014)	(0.008)	0.28	0.0148	(0.007)	(0.0016)	1.90	5.81
1	IARM 320A	4.22	4.79	0.93	0.33	0.021	(0.0015)	0.36	0.091	0.204	0.023	0.013	4.90	(0.014)	0.008	0.0032	1.76	6.01
2	BS 47A	4.22	0.47	0.130	0.44	0.017	0.015	0.27	0.11	0.12	0.015	.	0.011	0.018	0.008	0.003	0.016	.
1	ECRM 290-1D	4.18	4.81	0.91	0.24	0.016	0.016	0.08	0.081	0.33	.	.	5.12	0.0325	.	.	1.92	6.24
1	IARM FEM4-18	4.16	5.07	1.42	0.298	0.013	0.062	0.60	0.104	0.127	.	0.0058	0.080	0.042	0.0050	0.0018	3.97	5.55
3	CZ HS-2A	4.15	3.75	1.24	0.27	0.024	0.017	0.24	0.08	0.21	0.035	.	9.9	.	0.01	0.003	3.4	9.3
2	BS 32D	4.14	4.92	0.85	0.30	0.027	0.0022	0.25	0.039	0.053	0.018	.	0.010	0.018	.	.	1.82	6.15
1	IARM 306B	4.12	4.2	0.84	0.24	0.006	(0.001)	0.21	0.058	0.095	0.08	(0.003)	0.010	0.0049	0.004	(0.002)	0.98	(0.01)
1	BS TS15	4.12	0.48	1.64	0.27	(0.017)	0.067	0.357	0.065	(0.18)	0.0032	(0.006)	4.87	0.045	0.0074	0.0016	4.81	11.6
1	IARM 251A	4.1	5.16	1.398	0.33	0.014	0.058	0.58	0.13	0.131	0.01	0.016	0.129	0.044	0.011	0.003	3.9	5.5
1	DSZU C077	4.07	3.05	1.16	0.19	0.030	0.024	0.40	0.142	0.271	.	.	7.73	.	.	.	2.04	12.17
1	IARM 44C	4.04	5.02	0.82	0.301	0.027	0.004	0.31	0.12	0.132	0.05	(0.01)	0.247	0.033	0.010	0.004	1.91	6.0
2	CT M2	4.03	4.96	0.82	0.33	0.012	0.004	0.27	0.06	0.25	.	.	0.05	.	.	.	1.81	6.47
1	SS 485/1	4.02	0.66	0.94	0.41	0.043	0.039	0.30	.	(0.14)	(0.006)	(0.022)	4.97	.	0.019	.	1.02	17.8
1	DSZU C079	4.00	4.10	0.59	0.38	0.024	0.012	0.43	0.154	0.541	.	.	0.039	.	.	.	0.90	0.06
2	CT M10	3.97	7.89	0.88	0.27	0.016	0.004	0.30	0.061	0.14	.	.	0.012	.	.	.	1.99	0.008
1	DSZU C073	3.97	4.97	1.32	0.23	0.019	0.013	0.27	0.112	0.198	.	.	8.31	.	.	.	2.82	6.40
1	DSZU C074	3.93	5.21	1.10	0.16	0.023	0.020	0.16	0.141	0.158	.	.	5.08	.	.	.	1.94	6.47
1	SS 487/1	3.91	9.41	1.02	0.26	0.022	0.029	0.18	.	(0.14)	0.006	(0.012)	7.95	.	(0.006)	.	1.14	1.80
2	CT M1	3.91	8.22	0.80	0.30	0.012	0.005	0.22	0.087	0.12	.	.	.	.	.	.	1.05	1.58
1	IARM 281A	3.89	0.49	0.74	0.30	0.015	0.019	0.29	0.096	0.15	0.007	(0.02)	4.8	0.0064	0.02	0.004	0.90	17.6
1	IARM FeM62-18	3.86	10.2	1.32	0.27	0.016	0.015	0.37	0.115	0.129	(0.006)	.	0.105	0.045	.	(0.003)	2.02	6.31
2	CZ LA-5C	3.815	0.86	0.439	1.87	0.017	0.0088	0.394	0.138	2.59	0.081	0.026	0.088	0.024	0.031	0.048	0.536	0.631
1	DSZU C071	3.77	9.67	1.06	0.20	0.020	0.028	0.38	0.162	0.149	.	.	8.10	.	.	.	1.07	1.74
1	BS 19A	3.75	1.97	1.57	8.76	0.092	0.009	1.46	0.51	1.48	0.057	.	0.014	0.039	0.037	.	0.10	.
1	BS M-47	3.72	9.24	1.14	0.20	0.020	0.002	0.464	0.080	0.17	(0.002)	0.006	4.99	0.0219	0.006	(0.004)	1.23	1.36
2	BS TM1	3.72	8.4	0.86	0.23	0.007	0.012	0.46	0.054	0.057	.	.	0.45	.	.	.	1.05	1.7
1	KUT B15	3.70	1.20	0.98	0.69	0.030	0.031	0.80	0.14	0.15	0.13	.	0.21	.	.	(0.32)	(0.33)	.
1	IARM FeM1-18	3.67	8.0	0.85	0.318	0.013	(0.003)	0.44	0.091	0.104	0.007	.	0.226	0.037	0.0041	0.0044	1.19	1.98
2	CT M7	3.60	8.49	1.00	0.29	0.012	0.003	0.34	0.066	0.10	.	.	0.015	.	.	.	2.02	1.78
1	IARM 304A	3.55	8.04	0.857	0.260	0.019	0.0016	0.36	0.14	0.133	0.009	(0.01)	0.278	0.034	0.006	0.002	1.23	1.65
2	BS 49	3.51	2.41	0.36	0.33	0.014	0.015	0.92	0.072	0.20	0.004	.	2.00	0.0186	(0.004)	0.003	0.62	0.31
1	BS TS-7A	3.35	1.62	0.527	0.74	0.013	0.016	0.84	0.127	(0.031)	0.061	(0.005)	(0.005)	0.0124	(0.004)	(0.003)	0.265	(0.0014)
1	12X 40CDV12A	3.29	0.946	0.401	0.604	0.0060	0.0013	0.250	0.0978	0.1062	0.0208	0.0040	0.0197	0.0155	0.0049	.	0.198	.
1	14X MN5V	3.28	2.26	1.42	8.02	0.057	0.0207	2.27	0.551	3.09	0.145	.	.	0.0146	0.0278	0.51	0.0810	.
1	IARM FeS7-18	3.28	1.39	0.51	0.271	0.021	0.0032	0.47	0.128	0.170	(0.015)	(0.005)	0.0106	0.0102	(0.006)	0.0014	0.233	(0.016)

#	Number	Cr	Mo	C	Mn	P	S	Si	Cu	Ni	Al	As	Co	N	Sn	Ti	V	W

Number	B	Ca	Ce	Fe	La	Mg	Nb	O	Pb	Sb	Ta	Zn	Zr	Units	Comment
BS 47B	.	.	.	.	.	.	.	(0.004)	.	.	.	.	.	38 mm Ø x 7 or 19+ mm	
DSZU C047A	0.0006	0.0022	.	.	.	.	0.020	.	.	.	.	.	.	40 mm Ø x 25 mm	
ECRM 268-1D	0.0009	.	.	.	.	.	.	.	.	0.0017	.	.	.	38 mm Ø x 25 mm	
SS 486/1	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
IMZ 172	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
SRM 1157	.	.	.	.	.	.	.	.	.	.	.	.	.	32 mm Ø X 19 mm	
IARM 37C	.	.	.	.	.	.	(0.004)	.	.	.	.	.	.	31 mm Ø X 2 or 18 mm	
BS M-50	(0.0001)	(0.001)	.	88.8	.	(0.0002)	0.0008	0.0010	(0.0001)	(0.0006)	(0.00001)	.	(0.0006)	38 mm Ø x 7 or 19+ mm	17025
DSZU C072	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
IARM FeM2-18	.	.	.	81.4	.	.	(0.021)	(0.0016)	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
IARM 320A	0.0011	.	.	.	.	.	(0.015)	(0.0021)	.	.	.	.	(0.003)	31 mm Ø x 2 or 18 mm	
BS 47A	.	.	.	.	.	.	0.002	(0.003)	.	.	.	.	.	38 mm Ø x 7 or 19+ mm	
ECRM 290-1D	.	.	.	.	.	.	.	.	.	.	.	.	.	36 to 41 mm Ø x 28 to 35 mm	
IARM FEM4-18	.	.	.	79.0	.	.	.	.	.	.	.	.	.	38 mm Ø x 3 or 19 mm	
CZ HS-2A	.	.	.	.	.	.	.	.	.	.	.	.	.	39 mm Ø x 25 mm	
BS 32D	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 7 or 19+ mm	
IARM 306B	(0.001)	.	.	.	.	.	0.007	(0.001)	(0.001)	0.0025	.	.	(0.002)	31 mm Ø x 2 or 18 mm	
BS TS15	(0.0005)	(0.001)	.	71.4	.	(0.002)	0.009	(0.018)	.	.	.	.	(0.003)	38 mm Ø x 7 or 19+ mm	17034
IARM 251A	(0.002)	(0.0005)	.	.	.	.	0.016	(0.01)	(0.002)	.	.	.	(0.002)	31 mm Ø x 2 mm	
DSZU C077	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
IARM 44C	(0.002)	.	.	.	.	.	0.012	(0.003)	(0.002)	(0.004)	(0.004)	(0.006)	(0.002)	31 mm Ø x 2 mm	last
CT M2	.	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 16 mm	
SS 485/1	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
DSZU C079	.	.	.	.	.	.	.	.	.	.	.	.	.	35 mm Ø x 25 mm	
CT M10	.	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 16 mm	
DSZU C073	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
DSZU C074	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
SS 487/1	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
CT M1	.	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 16 mm	
IARM 281A	(0.003)	.	.	.	.	(0.003)	0.094	(0.003)	.	.	.	.	(0.002)	31 mm Ø x 2 or 18 mm	
IARM FeM62-18	(0.003)	.	.	.	.	.	(0.017)	(0.003)	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
CZ LA-5C	.	.	.	.	.	.	0.057	.	0.015	0.018	.	(0.013)	.	37 mm Ø x 25 mm	
DSZU C071	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
BS 19A	.	.	.	.	.	.	0.040	.	.	.	.	.	.	32 mm Ø x 17 mm	
BS M-47	.	(0.002)	.	.	.	.	(0.004)	0.0037	.	.	.	.	.	38 mm Ø x 7 or 19+ mm	17025
BS TM1	.	.	.	.	.	.	.	.	.	.	.	.	.	41 mm Ø x 7 or 19+ mm	
KUT B15	.	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 39 mm	
IARM FeM1-18	.	.	.	.	.	.	.	.	.	.	(0.0024)	.	0.0013	38 mm Ø x 3 or 19 mm	
CT M7	.	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 16 mm	
IARM 304A	0.002	(0.002)	.	.	.	.	0.021	0.002	.	(0.001)	(0.002)	.	(0.002)	31 mm Ø x 2 mm	
BS 49	.	.	.	.	.	.	.	.	.	.	.	.	.	49 mm Ø x 7 or 19+ mm	
BS TS-7A	0.0021	0.0004	.	92.3	.	<0.005	<0.01	(0.005)	<0.001	<0.01	<0.05	.	(0.0015)	36 mm Ø x 25 mm	17034
12X 40CDV12A	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 15 mm	
14X MN5V	.	.	.	.	.	.	0.041	.	.	.	(0.004)	.	.	40 mm Ø x 15 mm	
IARM FeS7-18	.	.	.	(93.6)	.	.	(0.005)	0.0023	0.0003	(0.0016)	.	(0.0011)	.	31 mm Ø x 2 or 18 mm	

Number	B	Ca	Ce	Fe	La	Mg	Nb	O	Pb	Sb	Ta	Zn	Zr	Units	Comment

Cr-Mo STEEL (Cr > 0.99, Mo > 0.44) CHART 3 or 3

= Class, where 1 = CRM and 2 = RM

#	Number	Cr	Mo	C	Mn	P	S	Si	Cu	Ni	Al	As	Co	N	Sn	Ti	V	W
1	IARM 259A	3.27	1.43	0.479	0.399	0.020	0.0007	0.44	0.081	0.194	0.016	0.006	0.011	0.0077	0.004	0.0026	0.256	0.035
1	14X MN5U	3.18	1.93	1.36	8.78	0.0552	0.0273	1.47	0.691	2.10	0.0257	.	.	0.0231	0.0228	0.93	0.0490	.
1	DSZU C075	3.10	4.06	1.16	0.16	0.021	0.015	0.47	0.120	0.202	.	.	8.03	.	.	.	2.10	9.27
1	SRM 1772	3.10	1.39	0.477	0.61	0.008	0.0031	0.264	0.083	0.105	.	.	.	.	.	.	0.236	.
1	12X 722M24	3.094	0.497	0.236	0.510	0.0135	0.0199	0.262	0.200	0.208	0.0187	0.0075	.	.	0.0116	.	0.0080	.
2	CZ CM-23A	3.064	0.816	0.917	0.803	0.0609	0.0348	0.934	0.234	0.230	0.323	0.0146	0.510	0.0149	0.059	0.154	0.157	0.104
1	VS RG30	3.06	0.62	0.38	0.357	.	0.013	0.45	0.161	0.62	.	.	0.50	.	.	.	0.63	0.91
1	SS 407/2	3.03	0.83	0.490	0.195	0.038	0.0105	0.66	0.397	0.527	0.040	.	0.0068	(0.011)	.	.	0.19	.
2	HRT FE2022-N	2.97	0.93	0.319	0.447	0.0058	(0.0011)	0.256	0.029	0.170	0.0134	(0.0025)	0.0084	0.0060	0.0029	(0.0015)	0.279	(0.0050)
2	HRT FE2021-N	2.81	2.7	0.33	0.31	0.0178	0.0014	0.28	0.070	0.193	0.014	0.004	0.011	0.007	0.004	0.001	0.52	0.027
1	SRM 1173	2.70	1.50	0.423	0.19	0.033	0.092	1.28	0.204	4.06	.	.	.	.	.	.	0.42	.
1	DSZU C046	2.67	0.69	0.785	0.257	0.025	0.0153	1.21	0.211	1.47	0.47	0.0020	0.006	0.0099	0.0033	0.115	0.72	0.47
1	IMZ 159	2.64	0.98	0.075	0.39	0.022	0.005	0.33	0.41	0.31	0.024	.	.	.	.	.	0.10	0.26
1	IMZ 160	2.64	0.98	0.077	0.38	0.023	0.004	0.34	0.42	0.30	0.031	.	.	.	.	.	0.10	0.26
1	SRM C1173	2.63	1.46	0.453	0.174	0.031	0.092	1.38	0.204	4.04	.	.	.	.	.	0.037	0.42	.
1	VS UG35/2	2.63	0.65	0.301	0.109	.	.	0.94	0.174	0.84	.	.	.	.	.	.	0.108	.
2	HRT FE2009-N	2.56	1.02	0.12	0.55	0.010	0.003	0.32	0.08	0.25	0.030	.	.	.	.	.	0.015	.
1	IARM 36C	2.43	0.98	0.14	0.49	0.009	0.014	0.25	0.142	0.085	(0.017)	(0.005)	(0.008)	0.008	(0.008)	.	0.0061	.
1	SRM 1270	2.34	0.956	0.077	0.626	0.0065	0.0065	0.247	0.114	0.174	.	.	0.038	.	.	.	0.013	.
1	BS 46B	2.28	1.00	0.126	0.472	0.0087	0.0187	0.219	0.128	0.081	0.020	0.0041	0.0074	0.0100	0.0073	(0.001)	0.0073	0.0008
1	IMZ 169	2.20	1.03	0.099	0.54	0.015	0.0155	0.35	0.128	0.073	0.075	.	0.012	0.0193	0.062	0.001	(0.016)	.
1	BS 1982	2.09	0.89	0.128	0.441	0.012	0.026	0.255	0.177	0.197	0.021	0.007	0.010	0.0097	0.013	(0.001)	0.003	.
1	VS UG8/11	1.74	0.622	0.728	1.97	0.036	0.0019	0.31	0.160	0.291	(0.01)	.	.	0.0138	0.0058	.	0.181	0.70
1	IMZ 57/1	1.67	0.48	0.46	1.05	0.028	0.012	0.58	0.14	0.15	.	.	.	.	.	.	0.34	.
1	TL 1002	1.615	0.3037	0.1895	0.5658	0.0140	0.0087	0.3088	0.0260	1.502	0.0274	0.0026	(0.004)	0.0043	(0.0016)	(0.0012)	(0.004)	.
1	ECRM 195-1D	1.56	0.77	0.757	0.571	0.017	0.012	0.467	0.036	0.33	.	.	.	0.010	.	.	0.31	.
2	HRT FE2018-N	1.46	0.75	0.24	0.74	0.012	(0.003)	0.29	0.06	0.43	0.017	.	.	0.0066	.	.	0.30	.
1	12X 15CDV6A	1.397	0.875	0.171	0.839	0.0056	0.0086	0.152	0.0231	0.044	0.019	0.0041	.	0.0069	0.0011	.	0.242	.
1	BS 45C	1.37	0.57	0.116	0.482	0.0077	0.016	0.69	0.129	0.078	0.018	(0.003)	0.0059	0.0082	0.0071	0.0012	0.0028	(0.003)
1	IARM 35L	1.35	0.607	0.119	0.535	0.007	0.014	0.679	0.123	0.071	0.017	0.0045	0.0070	0.0072	0.0088	(0.0015)	0.0037	(0.004)
1	IARM FeF11-21	1.349	0.614	0.114	0.530	0.0067	0.0141	0.679	0.123	0.069	0.018	0.0048	0.0062	.	0.0084	0.0015	0.0038	.
1	KUT A12	1.25	0.47	0.031	0.31	0.014	0.082	1.19	0.18	2.43	0.18	0.007	0.012	.	.	0.05	0.042	.
1	VS UG4/11	1.21	0.87	0.21	0.59	0.024	0.0069	0.285	0.074	0.173	0.032	.	0.0108	0.020	.	0.034	0.78	0.0092
2	BS 40B	1.18	1.07	0.71	2.28	0.020	0.006	0.35	0.076	0.089	0.002	0.004	0.020	0.0076	0.005	0.002	0.10	0.11
1	BS 45B	1.14	0.60	0.140	0.502	0.0068	0.017	0.583	0.101	0.136	0.030	0.0066	0.0090	0.0066	0.0069	0.0024	0.0083	(0.0038)
1	12X 11572A	1.107	0.499	0.111	0.498	0.0069	0.0025	0.649	0.0576	0.0977	0.0290	0.0030	.	0.0058	0.0049	.	.	.
1	SS 492/3	1.076	1.318	1.18	8.33	0.0318	0.0093	0.299	0.0211	4.17	0.131	(0.002)	0.0048	0.0225	.	0.0024	(0.004)	.
1	12X 14072A	1.061	0.573	0.430	0.680	0.0151	0.0061	0.322	0.203	0.136	0.0039	.	0.0098	0.0103	(0.011)	.	0.301	.
1	IARM 40B	1.04	1.22	0.68	1.98	0.012	0.003	0.39	0.050	0.096	(0.006)	.	0.015	0.0107	0.004	0.003	0.014	0.013
1	IARM 299A	1.03	0.99	0.469	0.70	0.008	0.002	0.22	0.100	0.57	0.092	0.003	0.0054	0.0028	0.0055	0.0038	0.120	0.010
2	BS 9-4-30	1.00	1.01	0.316	0.22	0.008	<0.002	0.06	0.088	7.25	0.004	.	4.46	0.0014	.	.	0.09	.
2	CT X67975	1.00	0.53	0.48	0.56	0.009	0.005	0.28	0.060	0.13	.	.	.	.	0.003	.	0.30	.

#	Number	Cr	Mo	C	Mn	P	S	Si	Cu	Ni	Al	As	Co	N	Sn	Ti	V	W

Number	B	Ca	Ce	Fe	La	Mg	Nb	O	Pb	Sb	Ta	Zn	Zr	Units	Comment
IARM 259A	0.0003	.	.	.	.	.	0.003	0.0014	<0.0005	.	.	.	0.001	31 mm Ø x 2 mm	
14X MN5U	.	.	.	.	.	.	0.102	.	.	.	(0.007)	.	.	40 mm Ø x 15 mm	
DSZU C075	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
SRM 1772	.	.	.	.	.	.	.	.	.	.	.	.	.	34 mm Ø x 19 mm	
12X 722M24	.	.	.	.	.	.	.	.	.	.	.	0.0028	.	38 mm Ø x 15 mm	
CZ CM-23A	0.0129	0.0004	.	.	.	.	0.628	.	0.0034	0.137	(0.051)	0.0250	0.137	37 mm Ø x 25 mm	
VS RG30	.	.	.	.	.	.	0.139	.	.	.	.	.	.	45 mm Ø x 28 mm	
SS 407/2	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
HRT FE2022-N	(0.0004)	.	(0.0030)	.	.	(0.0008)	(0.0034)	.	.	(0.0012)	(0.0028)	(0.0028)	(0.0010)	31 mm Ø X 20 mm	
HRT FE2021-N	0.0006	.	0.0011	.	.	0.0004	0.007	.	.	0.001	0.002	0.002	0.0012	36 mm Ø x 20 mm	
SRM 1173	.	.	.	.	.	.	.	.	.	.	.	.	.	32 mm Ø x 19 mm	
DSZU C046	(0.0004)	0.0007	.	.	.	.	(0.005)	.	.	.	.	.	.	40 mm Ø x 25 mm	last
IMZ 159	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
IMZ 160	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
SRM C1173	.	.	.	.	.	.	.	.	.	.	.	.	.	32 mm Ø x 19 mm	
VS UG35/2	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 28 mm	
HRT FE2009-N	.	0.0020	.	.	.	.	.	.	.	.	.	0.004	.	40 mm Ø x 40 mm	
IARM 36C	.	.	.	.	.	.	.	.	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
SRM 1270	.	.	.	.	.	.	.	.	.	.	.	.	.	32 mm Ø x 19 mm	
BS 46B	.	.	.	95.7	.	(0.0003)	(0.003)	0.0026	(0.001)	(0.002)	.	.	(0.002)	38 mm Ø x 7 or 19+ mm	17025
IMZ 169	.	.	.	.	.	.	(0.0045)	.	(0.001)	.	.	.	.	40 mm Ø x 40 mm	
BS 1982	.	.	.	.	.	.	(<0.003)	0.0017	(0.0003)	0.002	.	.	.	39 mm Ø x ~7 or ~18 mm	last ISO 25
VS UG8/11	.	.	.	.	.	.	.	.	.	.	.	.	.	45 mm Ø x 28 mm	
IMZ 57/1	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
TL 1002	0.00032	.	.	.	.	.	(0.0017)	.	.	.	.	.	.	48 mm Ø x 20 mm	
ECRM 195-1D	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 25 or 30 mm	
HRT FE2018-N	(0.0003)	.	.	.	.	.	.	.	.	.	.	.	.	36 mm Ø x 20 mm	
12X 15CDV6A	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
BS 45C	0.0003	0.0008	.	96.5	.	0.0002	(0.002)	0.0010	<0.005	(0.002)	.	.	<0.05	38 mm Ø x ~7 or 19+ mm	17034
IARM 35L	0.00044	.	.	.	.	.	(0.0026)	.	.	.	.	.	.	31 mm Ø x 2 mm	
IARM FeF11-21	0.0004	.	.	.	.	.	.	.	.	0.0017	.	.	.	38 mm Ø x 2 or 19 mm	
KUT A12	.	.	.	.	.	.	(0.03)	.	.	0.013	.	.	.	30-35 mm Ø x 39 mm	
VS UG4/11	.	.	.	.	.	.	0.071	.	.	.	.	.	.	45 mm Ø x 28 mm	
BS 40B	0.0006	.	.	.	.	.	.	.	.	.	.	.	.	41 mm Ø x 7 or 19+ mm	
BS 45B	(0.0003)	0.0008	.	96.7	.	(0.0004)	(0.002)	0.0015	(0.15)	(0.003)	.	.	(0.0009)	38 mm Ø x 7 or 19 mm	last 17034
12X 11572A	.	.	.	.	.	.	.	.	.	.	.	0.0009	.	38 mm Ø x 15 mm	
SS 492/3	.	.	.	.	.	.	.	.	.	.	.	.	.	Block 48 mm x 42 mm x 12 mm	
12X 14072A	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 15 mm	
IARM 40B	(0.0010)	.	.	.	.	.	0.005	(0.0014)	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
IARM 299A	0.0003	(0.001)	.	.	.	.	0.006	(0.002)	(0.001)	(0.002)	.	.	(0.001)	31 mm Ø x 2 or 18 mm	
BS 9-4-30	.	.	.	.	.	.	.	.	.	.	.	.	.	35 mm Ø x 7 or 19+ mm	
CT X67975	.	.	.	.	.	.	.	.	<0.001	.	.	.	.	30-35 mm Ø x 16 mm	last

Number	B	Ca	Ce	Fe	La	Mg	Nb	O	Pb	Sb	Ta	Zn	Zr	Units	Comment

LEADED STEEL

= Class, where 1 = CRM and 2 = RM OES regularly requires extension of preburn time

#	Number	Pb	C	Mn	P	S	Si	Cu	Ni	Cr	Al	As	Co	Mo	N	Sn	V
2	BS 74B	0.34	0.08	0.91	0.087	0.316	0.002	0.006	0.012	0.019	(0.002)	.	.	0.008	.	.	.
1	**BS 74C**	0.328	0.077	0.94	0.082	0.294	(0.002)	0.005	0.011	0.019	(<0.002)	0.004	.	0.008	0.0040	(<0.002)	0.0016
1	14X 12144A	0.328	0.0800	1.227	0.0630	0.325	0.0093	0.0106	0.0162	0.0807	0.0034	0.0022	.	0.0089	0.0066	.	.
2	CZ CM-15C	0.29	0.075	1.13	0.063	0.32	0.006	0.141	0.072	0.052	.	.	(0.01)	0.021	.	.	.
1	**BS 74D**	0.282	0.072	1.00	0.073	0.28	(0.007)	0.0057	0.0115	0.0185	(0.008)	0.0047	0.0043	0.0063	0.0040	(0.0010)	0.0012
1	**BS 75G**	0.247	0.161	1.08	0.0085	0.114	0.011	0.0300	0.045	0.079	0.0016	0.0028	0.0031	0.0174	0.0030	0.0014	0.0005
2	**BS 75F**	0.202	0.165	1.05	0.009	0.116	0.004	0.030	0.044	0.080	0.002	.	.	0.018	.	.	.
1	**BS 73C**	0.21	0.206	0.86	0.0111	0.031	0.280	0.025	0.56	0.574	0.028	0.0035	0.0028	0.180	0.0040	(0.002)	0.0031
IARM	Fe86L20-18	0.20	0.175	0.794	0.009	0.015	0.29	0.242	0.458	0.53	0.025	.	0.0085	0.203	0.0052	0.014	0.0016
1	**BS 73D**	0.18	0.202	0.834	0.018	0.027	0.287	0.240	0.420	0.47	0.015	0.0052	0.0123	0.162	0.0101	0.021	0.0028
2	**BS 72B**	0.174	0.497	0.87	0.029	0.029	0.26	0.21	0.169	0.985	0.020	(0.006)	0.012	0.187	0.0081	0.014	0.004
2	**BS 73B**	0.139	0.200	0.83	0.009	0.030	0.250	0.141	0.416	0.512	0.022	0.004	0.008	0.170	0.0113	0.008	(<0.002)
2	**BS 70B**	0.135	0.40	0.90	0.009	0.022	0.27	0.13	0.25	1.00	0.024	.	.	0.205	.	.	.
1	**BS 70C**	0.133	0.387	0.90	(0.009)	0.020	0.27	0.123	0.247	0.99	0.019	0.007	0.0086	0.202	0.0079	0.008	0.0026

Number	B	Ca	Nb	O	Sb	Ti	W	Zn	Grade	Units	
BS 74B	.	.	.	.	.	.	.	.	12L14	41 mm Ø x ~7 or 19+ mm	
BS 74C	.	.	(<0.005)	.	.	.	.	.	12L14	41 mm Ø x ~7 or 19+ mm	**17025**
14X 12144A	.	.	.	.	.	.	.	.		~40 mm Ø x ~15 mm	
CZ CM-15C	.	.	.	.	.	.	.	.		~39 mm Ø x 25 mm	
BS 74D	0.0009	<0.001	(0.0018)	(0.028)	<0.05	(0.0007)	<0.005	Fe:98.2	12L14	41 mm Ø x ~7 or 19+ mm	**17025, 17034**
BS 75G	(0.0002)	(0.0002)	(0.0003)	0.0155	.	(0.0004)	0.0004	.	11L17	41 mm Ø x ~7 or 19+ mm	**17025** Fe:[98.2]
BS 75F	.	.	.	.	.	.	.	.	11L17	40 mm Ø x ~7 or 19+ mm	**17025** last
BS 73C	(0.0002)	(0.0005)	(0.002)	0.0013	(0.002)	0.0024	(0.006)	.	86L20	38 mm Ø x ~7 or 19+ mm	**17025, 17034** Fe:[97.0]
IARM	Fe86L20-18 CRM	.	.	.	.	.	.	.	86L20	38 mm Ø x ~2 or 19 mm	
BS 73D	(0.0004)	0.0004	(0.0014)	0.0022	(0.0021)	0.0012	0.0107	<0.05	86L20	38 mm Ø x ~7 or 19+ mm	**17025, 17034** Fe: 97.1
BS 72B	.	.	(0.001)	.	.	(0.002)	.	.	41L50	37 mm Ø x ~7 or 19+ mm	**17025**
BS 73B	.	.	.	.	.	.	.	.	86L20	41 mm Ø x ~12 or ~17 mm	**25(pre-17025)** last
BS 70B	.	.	.	.	.	.	.	.	41L40MOD	41 mm Ø x ~7 or 19+ mm	**17025**
BS 70C	(0.0003)	.	<0.005	0.0020	(0.003)	0.0020	(0.0006)	.	41L40MOD	41 mm Ø x ~7 or 19+ mm	**17025, 17034** Fe: 96.7

RM LEADED AND BISMUTH STEEL XRF SET

Part Number: BS PB-BI-7 AVAILABLE INDIVIDUALLY ~7 mm discs **17025**

Grade	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	Bi	Pb	Sn	V	N
11L17	**BS 75F**	0.165	1.05	0.009	0.116	0.004	0.030	0.044	0.080	0.018	0.002	.	0.202	.	.	.
12L14	BS 74B	0.08	0.91	0.087	0.316	0.002	0.006	0.012	0.019	0.008	(0.002)	.	0.34	.	.	.
41L40	**BS 70B**	0.40	0.90	0.009	0.022	0.27	0.13	0.25	1.00	0.205	0.024	.	0.135	.	.	.
41L50	**BS 72B**	0.497	0.87	0.029	0.029	0.26	0.21	0.169	0.985	0.187	0.020	.	0.174	0.014	0.004	0.0081
4140 + Bi & S	BS 4140A	0.40	0.84	0.021	0.076	0.21	0.15	0.15	0.97	0.16	0.016	0.105	(0.001)	0.011	0.004	0.0098
4150 + Bi & S	BS 4150 MOD	0.47	0.90	0.024	0.079	0.21	0.19	0.15	1.01	0.21	0.012	0.070	0.0010	0.013	0.008	0.0087
8620 + Bi & S	BS 8620A	0.184	0.80	0.008	0.079	0.21	0.15	0.44	0.48	0.16	0.016	0.073	(0.001)	0.009	0.004	0.0107

CRM MANGANESE STEEL SET

AVAILABLE IN SET/6 ONLY 30 mm Ø x 24 mm

Number	C	Mn	P	S	Si	Cu	Ni	Cr	B	Co	Mo	N	Ti	V
NCS HS11720-6	2.38	5.36	0.029	0.108	1.69	0.474	3.43	0.084	0.017	0.107	1.51	0.016	0.218	0.837
NCS HS11720-1	1.96	22.96	0.188	0.0063	0.348	0.025	0.045	3.01	0.0021	0.0094	(0.0095)	0.091	0.0041	0.034
NCS HS11720-2	1.61	10.66	0.052	0.054	0.652	0.221	0.328	0.467	0.0038	0.010	0.118	0.054	0.047	0.132
NCS HS11720-3	1.16	16.75	0.077	0.055	1.16	0.143	0.152	0.257	0.0013	0.091	0.589	0.033	(0.030)	0.530
NCS HS11720-4	1.06	15.04	0.044	0.059	1.47	0.089	1.66	1.45	0.0023	0.0093	0.881	0.072	0.013	0.567
NCS HS11720-5	0.750	12.20	0.118	0.037	1.01	0.449	0.838	0.680	0.0009	0.0070	0.302	0.026	(0.018)	0.273

MANGANESE STEEL

= Class, where 1 = CRM and 2 = RM

#	Number	Mn	C	P	S	Si	Cu	Ni	Cr	Al	As	Co	Mo	N	Sn	Ti	V	W
1	DSZU C013	28.8	0.89	0.025	(0.002)	0.29	0.108	(0.20)	(0.14)	(8.6)	.	.	(0.46)	(0.002)	.	.	(0.1)	.
1	VS LG68	28.8	0.89	(0.02)	0.003	.	0.11	0.20	0.13	8.6	.	.	0.46	.	.	.	.	.
1	IMZ 199	28.74	0.90	0.022	(0.0006)	0.294	0.110	0.20	0.164	8.65	.	.	0.43	.	.	(0.004)	0.026	.
2	CZ SP-2D	26.90	1.369	0.0725	0.0031	0.558	0.106	0.388	1.507	0.0043	(0.0031)	0.0432	0.391	0.0203	(0.0026)	0.0213	0.178	0.083
1	IRSID 1833	22.57	0.605	0.0345	(0.0005)	0.193	0.030	0.0494	0.268	0.0025	0.0034	0.0089	0.0133	0.012	0.0043	0.0011	0.203	.
1	14X MN1AL	22.08	0.597	0.053	0.0054	0.944	0.178	0.692	1.321	(0.23)	.	.	0.499	0.0585	0.0393	0.0346	0.0226	.
1	DSZU C012	20.9	0.39	0.021	0.0072	0.31	0.087	0.103	0.17	(2.9)	.	.	(0.03)	(0.013)	.	.	(1.14)	.
2	BS 17	19.59	0.63	0.047	0.007	0.21	0.075	0.03	1.46	(0.02)	.	.	0.46	.	(0.012)	.	(0.02)	.
2	BS 17A	19.38	0.588	0.043	0.005	0.22	0.135	0.060	1.37	0.052	.	0.013	0.52	0.038	0.012	.	0.016	.
1	NCS AH37335	18.70	1.30	0.048	0.007	0.457	0.021	0.593	2.00	(0.011)	.	.	0.249	0.024	.	0.006	0.201	0.077
1	VS LG69	18.6	0.45	0.033	0.0048	0.50	0.088	0.178	0.428	2.78	.	.	0.020	0.011	.	.	.	.
1	DSZU C011a	17.4	0.45	0.042	0.008	0.43	0.089	0.11	0.36	(2.8)	.	.	(0.014)	.	.	.	.	.
1	IMZ 301	17.12	0.45	0.013	0.013	0.56	0.021	0.244	1.14	.	0.0030	0.009	.	0.028	.	0.0015	0.006	.
1	NCS AH37334	16.90	1.20	0.051	0.011	0.655	0.024	0.200	2.20	0.018	.	.	0.180	0.021	.	0.125	0.253	0.091
1	IMZ 198	16.10	0.44	0.031	0.0090	0.423	0.104	0.058	0.30	2.80	.	.	(0.008)	.	.	(0.005)	.	.
1	DSZU C011	16.09	0.44	0.031	0.0093	0.41	0.105	0.058	0.30	(2.6)	.	.	(0.01)	(0.010)	.	.	.	.
2	CZ SP-2C	14.5	1.40	0.037	0.016	0.29	0.35	0.050	1.56	0.030	(0.005)	0.044	0.050	0.027	0.037	0.014	0.051	0.033
2	HRT FE2022-H	14.08	0.669	(0.008)	(0.0035)	0.149	0.035	3.09	0.142	(0.0069)	.	0.011	0.013	(0.0106)	(0.0036)	(0.0019)	(0.018)	(0.0130)
1	14X MN4-21	13.80	0.897	0.058	0.0069	0.95	0.446	1.18	2.00	(0.2060)	0.007	0.014	0.832	0.082	0.077	0.056	0.042	0.005
1	DSZU C023	13.09	0.79	0.052	0.0062	0.291	0.111	3.15	0.313	(0.006)	.	.	(0.02)	(0.018)	.	(0.004)	(0.02)	.
1	DSZU C022	12.89	1.15	0.087	0.0057	0.34	0.103	0.122	0.192	(0.007)	.	.	(0.03)	(0.013)	.	(0.006)	(0.03)	.
1	NCS AH37333	12.46	1.23	0.061	0.009	0.428	0.017	3.34	1.72	0.022	.	.	0.951	0.024	.	0.064	0.085	.
1	14X MN2S	12.3	0.80	0.024	0.0080	2.20	0.089	0.726	0.364	0.020	.	.	1.08	0.038	0.0150	0.018	0.089	.
1	DSZU C010	12.25	1.20	0.082	0.0035	0.49	0.120	0.108	0.187	(0.006)	.	.	(0.01)	(0.017)	.	.	.	.
1	SS 493/3	11.15	0.819	0.12	0.009	0.861	0.017	3.24	0.259	0.035	.	.	1.04	0.025	.	.	0.025	.
1	14X MN3U	10.2	1.09	0.0239	0.015	1.11	0.135	0.387	0.599	0.045	.	.	0.343	0.025	0.0254	(0.10)	0.022	.
1	DSZU C020	8.85	0.97	0.024	(0.015)	0.091	0.53	1.36	0.96	(0.004)	.	.	0.13	(0.020)	.	(0.003)	0.152	.
1	14X MN5U	8.78	1.36	0.0552	0.0273	1.47	0.691	2.10	3.18	0.0257	.	.	1.93	0.0231	0.0228	0.93	0.0490	.
2	BS 19A	8.76	1.57	0.092	0.009	1.46	0.51	1.48	3.75	0.057	.	0.014	1.97	0.039	0.037	.	0.10	.
1	SS 492/3	8.33	1.18	0.0318	0.0093	0.299	0.0211	4.17	1.076	0.131	(0.002)	0.0048	1.318	0.0225	.	0.0024	(0.004)	.
1	14X MN5V	8.02	1.42	0.057	0.0207	2.27	0.551	3.09	3.28	0.145	.	.	2.26	0.0146	0.0278	0.51	0.0810	.
1	12X 354B	5.03	0.252	0.0478	0.0105	0.200	0.0679	0.082	0.0487	0.0150	0.023	0.0237	0.0328	0.0027	0.0154	0.0248	0.0204	0.0248
1	VS UG146	2.42	0.77	(0.05)	0.028	1.99	0.593	1.39	0.186	0.017	0.056	0.0128	0.271	0.017	.	0.075	0.062	0.028
1	IARM 196A	2.40	1.08	0.040	0.014	0.35	0.25	0.61	2.35	0.015	0.025	0.013	0.129	0.0084	0.033	0.014	0.157	0.189
2	BS 40B	2.28	0.71	0.020	0.006	0.35	0.076	0.089	1.18	0.002	0.004	0.020	1.07	0.0076	0.005	0.002	0.10	0.11
2	CZ CM-9B	2.27	0.17	(0.008)	(0.010)	0.89	0.040	0.023	1.36	0.049	(0.002)	(0.004)	(0.002)	.	(0.003)	(0.002)	(0.006)	.
2	DSZU C043A	2.14	0.222	0.060	0.064	0.131	0.51	2.93	0.49	0.066	(0.001)	.	0.146	(0.009)	0.0023	0.041	0.25	0.092
1	BS 1762A *	2.09	0.37	0.047	0.043	0.45	0.16	1.19	0.90	0.064	0.030	0.070	0.37	<0.05	0.080	0.12	0.22	0.032

#	Number	Mn	C	P	S	Si	Cu	Ni	Cr	Al	As	Co	Mo	N	Sn	Ti	V	W

Number	B	Bi	Ca	Ce	Fe	La	Mg	Nb	O	Pb	Sb	Ta	Zn	Zr	Units	Comment
DSZU C013	.	.	.	.	.	.	.	(0.46)	.	.	.	.	.	.	Disc ~39 mm Ø x 20 mm	
VS LG68	.	.	.	.	.	.	.	0.46	.	.	.	.	.	.	Disc ~39 mm Ø x ~19mm	
IMZ 199	(0.001)	.	.	.	.	.	.	0.43	.	.	.	.	.	.	Disc 56 mm Ø x 15 mm	
CZ SP-2D	(0.0008)	.	.	.	.	.	.	0.0163	.	.	.	.	.	.	Disc 37 mm Ø x 25 mm	
IRSID 1833	(0.00017)	.	.	.	.	.	.	0.0026	.	0.00007	(0.0005)	.	(0.0014)	.	Disc 35 mm Ø x 25 mm	
14X MN1AL	.	.	.	.	.	.	.	0.096	.	.	.	(0.011)	.	.	Disc ~40 mm Ø x ~15 mm	
DSZU C012	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~39 mm Ø x 20 mm	
BS 17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x various mm last	
BS 17A	.	.	.	.	.	.	.	0.06	.	.	.	.	.	.	Disc 32 mm Ø x 17 mm	
NCS AH37335	.	.	.	0.011	.	.	.	0.077	.	.	.	.	.	.	Disc 36 mm Ø x 36 mm	
VS LG69	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~39 mm Ø x ~19mm	
DSZU C011a	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm	
IMZ 301	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 44 mm Ø x 35 mm	
NCS AH37334	.	.	.	0.027	.	0.014	.	0.085	.	.	.	.	.	.	Disc 36 mm Ø x 36 mm	
IMZ 198	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 50 mm Ø x 15 mm	
DSZU C011	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~39 mm Ø x 20 mm	
CZ SP-2C	(0.003)	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~39 mm Ø x 25 mm	
HRT FE2022-H	(0.0008)	.	.	.	.	.	.	(0.006)	.	.	.	.	.	.	Disc 35 mm Ø X 20 mm	
14X MN4-21	(0.0029)	.	.	.	Rem	.	.	0.182	(0.0026)	.	.	(0.0104)	.	.	Disc ~40 mm Ø x ~15 mm	
DSZU C023	(0.001)	.	.	.	.	.	.	(0.02)	.	.	.	.	.	.	Disc ~39 mm Ø x 20 mm	
DSZU C022	(0.001)	.	.	.	.	.	.	(0.01)	.	.	.	.	.	.	Disc ~39 mm Ø x 20 mm	
NCS AH37333	.	.	.	0.029	.	0.017	.	0.108	.	.	.	.	.	.	Disc 36 mm Ø x 36 mm	
14X MN2S	.	.	.	.	.	.	.	0.23	.	.	.	(0.006)	.	.	Disc ~40 mm Ø x ~15 mm	
DSZU C010	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~39 mm Ø x 20 mm	
SS 493/3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Block 48 mm x 42 mm x 12 mm	
14X MN3U	.	.	.	.	.	.	.	0.398	.	.	.	0.010	.	.	Disc ~40 mm Ø x ~15 mm	
DSZU C020	(0.002)	.	.	.	.	.	.	(0.02)	.	.	.	.	.	.	Disc ~39 mm Ø x 20 mm	
14X MN5U	.	.	.	.	.	.	.	0.102	.	.	.	(0.007)	.	.	Disc ~40 mm Ø x ~15 mm	
BS 19A	.	.	.	.	.	.	.	0.040	.	.	.	.	.	.	Disc 32 mm Ø x 17 mm	
SS 492/3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Block 48 mm x 42 mm x 12 mm	
14X MN5V	.	.	.	.	.	.	.	0.041	.	.	.	(0.004)	.	.	Disc ~40 mm Ø x ~15 mm	
12X 354B	.	.	.	.	.	.	.	0.0802	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
VS UG146	0.0019	0.0038	0.0023	0.009	.	.	.	0.047	.	0.011	.	0.029	0.0098	.	Disc ~37 mm Ø x ~20 mm	
IARM 196A	0.0017	.	0.0002	.	.	.	.	0.087	0.0021	0.001	0.006	.	.	0.006	Disc 31 mm Ø x 18 mm	
BS 40B	0.0006	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	
CZ CM-9B	(0.004)	.	.	.	.	.	.	(0.06)	.	(0.002)	(0.003)	.	.	(0.003)	Disc ~39 mm Ø x 25 mm	
DSZU C043A	(0.001)	.	0.0004	.	.	.	.	0.006	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm	
BS 1762A *	0.003	* Provisional Analysis [93.7]				.	.	0.10	<0.05	.	0.013	0.034	.	0.033	Disc 36 mm Ø x 25 mm	

Number	B	Bi	Ca	Ce	Fe	La	Mg	Nb	O	Pb	Sb	Ta	Zn	Zr	Units	Comment

RESULFURIZED STEEL

CONTINUED ON THE NEXT PAGE

= Class, where 1 = CRM and 2 = RM OES regularly requires extension of preburn time to analyze correctly

#	Number	S	C	Mn	P	Si	Cu	Ni	Cr	Al	As	Co	Mo	N	Sn	Ti	V
1	14X FeNi40C	1.03	0.012	0.031	0.0148	0.050	0.081	40.1	0.64	2.00	.	1.057	.	.	.	.	.
1	IMZ 123	0.38	0.25	1.57	0.030	0.23	0.093	0.057	0.16	0.032	0.033	.	.	0.0171	(0.007)	.	.
1	ECRM 085-1D	0.336	0.067	0.977	0.062	0.008	0.291	.	.	.	.	0.019	.	.	.	.	0.0021
1	14X 12144A	0.325	0.0800	1.227	0.0630	0.0093	0.0106	0.0162	0.0807	0.0034	0.0022	.	0.0089	0.0066	.	.	.
1	IARM Fe1144-22	0.323	0.406	1.34	0.0091	0.171	0.115	0.036	0.061	.	0.0040	0.0061	0.0112	0.0081	0.0081	0.0007	0.0023
2	BS 66K	0.322	0.051	0.86	0.062	(0.004)	0.013	0.012	0.006	0.002	.	0.005	0.003	(0.0074)	.	<0.002	0.001
2	CZ CM-15C	0.32	0.075	1.13	0.063	0.006	0.141	0.072	0.052	.	.	(0.01)	0.021	.	.	.	.
2	BS 74B	0.316	0.08	0.91	0.087	0.002	0.006	0.012	0.019	(0.002)	.	.	0.008	.	.	.	.
1	BS 66L	0.315	0.065	0.844	0.061	0.002	0.007	0.015	0.026	0.0008	0.0020	0.0035	0.0012	0.0031	(0.0010)	(<0.0010)	0.0006
1	14X 12130A	0.305	0.0871	1.219	0.061	0.022	0.0201	0.0345	0.0505	0.0024	0.0016	.	0.0102	0.0097	0.0054	.	.
1	BS 74C	0.294	0.077	0.94	0.082	(0.002)	0.005	0.011	0.019	(<0.002)	0.004	.	0.008	0.0040	(<0.002)	.	0.0016
1	IARM Fe1215-18	0.29	0.043	0.96	0.059	(0.006)	0.164	0.055	0.051	.	0.0043	0.0055	0.016	0.0109	0.0083	0.0007	0.0020
1	IARM 199C	0.281	0.469	1.55	0.0155	0.21	0.193	0.085	0.190	0.0019	0.0059	0.007	0.0293	0.0070	0.0084	0.0016	(0.0037)
1	BS 74D	0.28	0.072	1.00	0.073	(0.007)	0.0057	0.0115	0.0185	(0.008)	0.0047	0.0043	0.0063	0.0040	(0.0010)	(0.0007)	0.0012
1	IMZ 124	0.28	0.10	0.60	0.082	(0.019)	0.060	0.046	0.11	0.005	0.004	.	.	0.0059	0.009	.	.
1	BS 1144A	0.271	0.468	1.43	0.0108	0.214	0.147	0.063	0.076	0.0020	0.0052	0.0064	0.0154	0.0095	0.0079	(0.0008)	0.0015
1	14X MSFM4A	0.224	0.226	1.141	0.0386	0.469	0.429	6.22	1.69	(0.007)	.	0.0253	0.974	0.0220	0.0141	.	0.0151
1	IMZ 122	0.21	0.27	1.33	0.073	0.43	0.25	0.25	0.19	(0.027)	0.007	.	.	0.0110	0.12	.	.
1	14X 606M36TA	0.196	0.378	1.574	0.0159	0.167	0.179	0.0931	0.163	0.0071	0.0085	.	0.272	0.0096	0.0103	.	.
1	14X 11390A	0.190	0.420	1.040	0.0342	0.198	0.0395	0.0239	0.0609	0.0026	0.0028	.	0.0067	0.0042	0.0022	.	.
1	ECRM 058-2D	0.1712	0.424	1.186	0.0098	0.1080	0.261	0.199	0.1211	.	0.0095	.	0.0589	0.0107	.	.	.
1	14X MSFM3G	0.147	0.438	1.809	0.0297	0.292	0.205	0.161	0.454	(0.18)	.	0.0494	0.390	0.0206	0.0378	.	0.0199
1	BS A-11	0.123	2.42	0.507	0.023	0.98	0.092	0.25	5.21	0.0054	0.0057	0.044	1.25	0.110	0.0055	0.0019	9.24
1	IARM 29E	0.121	0.193	1.19	0.0157	0.239	0.253	0.082	0.105	0.0032	0.0085	0.008	0.0269	0.0093	0.0109	0.0014	0.0255
1	14X 11170A	0.120	0.154	1.129	0.0133	0.151	0.1101	0.0877	0.1126	0.0023	0.0044	.	0.0317	0.0112	0.0110	.	.
2	BS 75F	0.116	0.165	1.05	0.009	0.004	0.030	0.044	0.080	0.002	.	.	0.018	.	.	.	.
2	BS 65C	0.115	0.150	1.19	0.007	0.24	0.24	0.063	0.066	(0.002)	.	(0.007)	0.012	0.0084	.	.	0.002
1	BS 75G	0.114	0.161	1.08	0.0085	0.011	0.0300	0.045	0.079	0.0016	0.0028	0.0031	0.0174	0.0030	0.0014	(0.0004)	0.0005
2	BS 66B	0.112	0.418	1.56	0.018	0.017	0.028	0.032	0.093	(0.001)	.	0.005	0.019	0.0056	0.0016	(0.001)	0.0014
1	BS 1141 *	0.11	0.40	1.50	0.014	0.24	0.12	0.051	0.099	0.004	0.004	0.007	0.018	<0.05	0.006	0.002	0.002
1	IARM 348A	0.102	0.384	1.46	0.0121	0.270	0.230	0.081	0.123	(0.002)	(0.007)	(0.010)	0.026	(0.010)	0.0112	0.0015	0.0029
1	12X 352E	0.101	0.356	0.817	0.067	0.413	0.125	0.344	0.248	0.263	0.029	0.025	0.230	.	0.109	0.240	0.0251
1	IMZ 121	0.097	0.39	1.18	0.057	(0.056)	0.032	0.029	0.036	0.016	0.002	.	.	0.0125	0.059	.	.
1	IARM 307A	0.096	0.163	1.44	0.0113	0.281	0.190	0.197	0.104	0.032	0.008	(0.010)	0.045	0.0108	0.0090	0.0015	(0.0028)
1	IARM 307B	0.094	0.162	1.45	(0.012)	(0.30)	0.191	0.195	0.105	0.034	.	0.0101	0.045	(0.011)	0.010	(0.003)	(0.003)

#	Number	S	C	Mn	P	Si	Cu	Ni	Cr	Al	As	Co	Mo	N	Sn	Ti	V
1	BS 3993	0.094	0.152	1.16	0.012	0.260	0.111	0.045	0.072	0.002	0.004	0.006	0.010	0.0071	0.006	(0.0008)	0.002
1	SRM 1173	0.092	0.423	0.19	0.033	1.28	0.204	4.06	2.70	.	.	.	1.50	.	.	.	0.42
1	SRM C1173	0.092	0.453	0.174	0.031	1.38	0.204	4.04	2.63	.	.	.	1.46	.	.	0.037	0.42
1	12X 15260X	0.086	0.404	1.67	0.034	0.390	0.119	0.499	2.48	0.57	0.044	0.085	0.093	.	0.0021	0.0064	0.417
1	12X 15253T	0.0821	0.222	1.208	0.0900	0.347	0.266	0.991	2.022	0.0242	0.0216	0.265	1.039	0.029	0.309	.	0.276
1	KUT A12	0.082	0.031	0.31	0.014	1.19	0.18	2.43	1.25	0.18	0.007	0.012	0.47	.	.	0.05	0.042
1	IRSID 1745	0.081	0.295	0.850	0.0077	0.220	0.202	0.188	1.130	0.0202	0.0262	.	0.222	.	0.0134	(0.003)	(0.004)
2	BS 4150MOD	0.079	0.47	0.90	0.024	0.21	0.19	0.15	1.01	0.012	0.005	0.012	0.21	0.0087	0.013	(0.002)	0.008
2	BS 8620A	0.079	0.184	0.80	0.008	0.21	0.15	0.44	0.48	0.016	0.007	0.010	0.16	0.0107	0.009	(0.002)	0.004
2	BS 10V	0.079	2.46	0.52	0.019	0.89	0.076	0.08	5.41	(<0.002)	.	0.009	1.30	0.064	.	.	9.50
1	IRSID 1750	0.075	0.359	1.801	0.0128	0.246	0.320	0.187	0.227	0.0175	0.0188	(0.0120)	0.0433	0.0107	0.0137	(0.0016)	0.114
1	BS 42	0.074	0.518	1.22	0.020	0.234	0.251	0.188	0.663	0.020	(0.006)	(0.011)	0.191	0.008	(0.011)	0.0017	0.0031
1	SS 604/2	0.072	0.199	1.91	0.016	0.75	(0.07)	(0.09)	(0.06)	0.008	.	(0.01)	(0.02)	.	.	.	(0.001)
1	VS UG144	0.071	0.465	0.141	0.022	0.86	0.064	4.98	0.412	0.069	0.018	0.0245	0.136	0.011	0.027	0.293	0.143
1	SS 405/1	0.069	0.032	1.28	0.018	1.71	0.013	0.22	0.15	.	.	.	(0.002)	.	.	.	0.28
1	12X 15255R	0.067	0.392	1.09	0.080	1.01	0.288	0.317	1.49	0.161	.	0.045	0.113	0.0058	0.106	0.052	0.491
1	BS TS15	0.067	1.64	0.27	(0.017)	0.357	0.065	(0.18)	4.12	0.0032	(0.006)	4.87	0.48	0.045	0.0074	0.0016	4.81
1	12X 12749X	0.066	0.176	1.41	0.023	0.48	0.253	0.47	0.453	0.202	0.081	0.426	0.195	.	0.018	0.0178	0.068
1	DSZU C050	0.065	0.082	1.21	0.040	0.287	0.304	0.118	0.075	(0.008)	(0.002)	.	0.48	.	(0.004)	(0.002)	0.007
2	DSZU C043A	0.064	0.222	2.14	0.060	0.131	0.51	2.93	0.49	0.066	(0.001)	.	0.146	(0.009)	0.0023	0.041	0.25
1	KUT B2/2	0.064	0.065	1.22	0.087	(0.38)	0.32	1.49	.	0.10	.	.	1.06	.	.	(0.25)	0.87
1	12X 12746V	0.064	0.048	1.19	0.034	0.156	0.646	0.226	0.374	0.459	0.051	0.142	0.658	.	0.264	0.088	0.0208
2	IARM 168A	0.064	0.003	0.12	0.030	0.46	0.009	2.32	0.004	0.19	(0.003)	0.003	0.69	0.0002	0.003	0.004	0.004
1	BS 4150MOD-A	0.062	0.503	1.12	0.0172	0.253	0.192	0.095	0.799	0.0023	0.0038	0.0070	0.170	0.0081	0.0090	0.0018	0.029
1	IARM FEM4-18	0.062	1.42	0.298	0.013	0.60	0.104	0.127	4.16	.	0.0058	0.080	5.07	0.042	0.0050	0.0018	3.97
1	12X LA1B	0.060	0.104	1.262	0.0090	0.777	0.0572	0.210	1.026	0.0104	0.0212	0.0144	0.068	0.0144	.	.	0.448
1	VS UG145	0.059	0.312	0.220	0.0066	0.164	0.307	0.453	1.10	0.009	0.034	0.161	1.34	0.012	0.0072	0.020	0.68
2	CZ CM-6A	0.058	0.52	0.37	0.016	0.27	0.05	0.19	0.37	0.02	0.025	0.03	0.04	0.009	0.017	0.03	0.05
1	IARM 251A	0.058	1.398	0.33	0.014	0.58	0.13	0.131	4.1	0.01	0.016	0.129	5.16	0.044	0.011	0.003	3.9
1	SRM 1138a	0.056	0.11	0.35	0.035	0.25	0.09	0.10	0.13	.	.	.	0.05	.	.	.	0.02
1	SS 603/2	0.056	0.79	0.236	0.020	0.97	(0.05)	(0.03)	(0.04)	0.076	.	(0.01)	(0.004)	.	.	.	(0.001)
1	DSZU C070	0.054	2.43	0.38	0.021	0.79	0.130	0.153	5.57	.	.	0.053	1.28	.	.	.	9.39

#	Number	S	C	Mn	P	Si	Cu	Ni	Cr	Al	As	Co	Mo	N	Sn	Ti	V

RM RESULFURIZED STEEL XRF SET

Part Number: BS RESUL-4 AVAILABLE INDIVIDUALLY ~7 mm discs

Grade	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	Co	N	Sn	V	As
1117	BS 65C	0.150	1.19	0.007	0.115	0.24	0.24	0.063	0.066	0.012	(0.002)	(0.007)	0.0084	0.02	0.002	(0.008)
1140 + P	BS 52D	0.436	0.97	0.068	0.088	0.18	0.060	0.18	0.16	0.09	0.028	0.012	0.0025	0.004	0.002	.
1141	BS 66B	0.418	1.57	0.018	0.110	0.02	0.031	0.033	0.094	0.019	0.002	0.005	(0.006)	0.001	0.002	.
1215	BS 66K	0.051	0.86	0.062	0.322	(0.004)	0.013	0.012	0.006	0.003	0.002	0.005	(0.0074)	<0.001	0.001	.

RESULFURIZED STEEL **CONTINUED FROM THE PREVIOUS PAGE**

Number	B	Bi	Ca	Fe	Nb	O	Pb	Sb	Se	W	Zn	Zr	Units	Comment
14X FeNi40C	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
IMZ 123	.	.	.	.	.	.	0.030	0.030	.	.	.	.	Disc 40 mm Ø x 40 mm	
ECRM 085-1D	.	.	.	.	.	.	0.0010	0.0073	.	.	0.0025	.	Disc 38 mm Ø x 25 or 30 mm	
14X 12144A	.	.	.	.	.	.	0.328	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
IARM Fe1144-22	.	.	.	.	.	(0.002)	.	0.0017	.	0.0017	.	.	disc	
BS 66K	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	
CZ CM-15C	.	.	.	.	.	.	0.29	.	.	.	.	.	Disc ~39 mm Ø x 25 mm	
BS 74B	.	.	.	.	.	.	0.34	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	
BS 66L	(<0.0003)	.	(<0.0010)	.	(0.0012)	.	0.0007	0.0021	.	(<0.0010)	.	.	Disc 44 mm Ø X ~7 or 19+ mm	17025
14X 12130A	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
BS 74C	.	.	.	.	(<0.005)	.	0.328	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	17025
IARM Fe1215-18	.	.	.	.	0.0012	.	.	0.0018	.	.	.	.	Disc ~38 mm Ø x ~3 or ~19 mm	
IARM 199C	0.0012	(0.003)	(0.0011)	.	0.0016	0.0037	(0.001)	(0.003)	.	0.0023	(0.0006)	.	Disc 31 mm Ø x 2(ok) or 18(last) mm	
BS 74D	0.0009	.	<0.001	98.2	(0.0018)	(0.028)	0.282	<0.05	.	<0.005	.	(0.0009)	Disc 41 mm Ø x ~7 or 19+ mm	17034
IMZ 124	.	.	.	.	.	.	(0.002)	0.002	.	.	.	.	Disc 40 mm Ø x 40 mm	
BS 1144A	(0.0003)	.	(0.0005)	97.3	(0.002)	0.0019	(0.0006)	(0.002)	.	(0.0009)	.	(0.0006)	Disc 38 mm Ø x ~7 or 19+ mm	17025
14X MSFM4A	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm	
IMZ 122	.	.	.	.	.	.	(0.020)	0.019	.	.	.	.	Disc 40 mm Ø x 40 mm	
14X 606M36TA	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
14X 11390A	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
ECRM 058-2D	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm	
14X MSFM3G	0.0043	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
BS A-11	0.0008	.	(0.0002)	79.5	(0.0070)	0.028	(0.00006)	(0.001)	.	(0.080)	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm	17025
IARM 29E	0.0007	.	0.0012	.	0.0024	(0.005)	(0.001)	(0.003)	(0.0006)	.	(0.004)	.	Disc 31 mm Ø x 2 or 18 mm	
14X 11170A	.	.	.	.	.	.	0.0011	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
BS 75F	.	.	.	.	.	.	0.202	.	.	.	.	.	Disc 40 mm Ø x ~7 or 19+ mm	17025
BS 65C	.	.	.	.	.	.	.	.	.	.	.	.	Disc 37 mm Ø x ~7 or 19+ mm	
BS 75G	(0.0002)	.	(0.0002)	[98.2]	(0.0003)	0.0155	0.247	.	.	0.0004	.	.	Disc 41 mm Ø x ~7 or 19+ mm	17025
BS 66B	0.0003	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	
BS 1141 *	0.0004	*Provisional Analysis		[97.4]	0.004	<0.05	<0.005	<0.005	.	0.002	.	0.0007	Disc 41 mm Ø x ~7 or 19+ mm	
IARM 348A	(0.0013)	<0.02	0.0010	.	0.027	(0.003)	(0.002)	(0.003)	<0.005	(0.009)	<0.003	(0.003)	Disc 31 mm Ø X 2 or 18 mm	
12X 352E	.	.	.	.	0.063	.	.	.	.	0.275	.	.	Disc ~40 mm Ø x ~15 mm	
IMZ 121	.	.	.	.	.	.	0.011	0.017	.	.	.	.	Disc 40 mm Ø x 40 mm	
IARM 307A	<0.005	<0.02	<0.0005	.	(0.002)	(0.003)	(0.002)	<0.004	<0.006	(0.005)	<0.002	(0.002)	Disc 31 mm Ø X 2 or 18 mm	
IARM 307B	.	.	.	.	(0.0013)	.	.	.	.	.	.	.	Disc 31 mm Ø X 2 or 18 mm	

Number	B	Bi	Ca	Fe	Nb	O	Pb	Sb	Se	W	Zn	Zr	Units	Comment
BS 3993	.	.	(0.0002)	.	.	(0.0030)	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	ISO 25
SRM 1173	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm	
SRM C1173	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm	
12X 15260X	.	.	.	.	0.183	.	0.0012	.	.	.	.	0.0054	Disc ~40 mm Ø x ~15 mm	
12X 15253T	.	.	.	.	0.374	.	.	.	.	0.276	.	.	Disc ~40 mm Ø x ~15 mm	Ta: 0.007
KUT A12	.	.	.	.	(0.03)	.	.	0.013	.	.	.	.	Disc 30-35 mm Ø x 39 mm	
IRSID 1745	.	.	.	.	.	.	.	.	.	.	(0.003)	.	Disc 48 mm Ø x 30 mm	
BS 4150MOD	.	0.070	0.0010	.	.	(0.003)	0.0010	.	.	.	.	.	Disc 38 mm Ø x ~7 mm	last
BS 8620A	.	0.073	0.0003	.	.	(0.004)	(0.001)	.	.	.	.	.	Disc 38 mm Ø x ~7 mm	last
BS 10V	.	.	.	.	.	.	.	.	.	0.013	.	.	Disc 41 mm Ø x ~7 or 19+ mm	
IRSID 1750	(0.0002)	(0.00002)	(0.0002)	.	(<0.0010)	.	(<0.001)	0.0031	(0.0002)	(0.004)	(0.0012)	(0.0002)	Disc 38 mm Ø x 25 mm	
BS 42	<0.005	.	<0.005	96.6	(0.0012)	(0.003)	<0.005	.	.	<0.005	.	.	Disc 44 mm Ø X ~7 to 19 mm	17034, last
SS 604/2	.	.	.	.	.	.	.	.	.	.	.	(<0.005)	Disc 44 mm Ø X 19 mm	
VS UG144	0.0043	.	.	.	0.018	.	0.0017	(0.01)	.	1.32	0.0012	0.068	Disc ~37 mm Ø x ~20 mm	Ce: 0.004
SS 405/1	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
12X 15255R	.	.	.	.	0.203	.	.	.	.	0.143	.	(0.011)	Disc ~40 mm Ø x ~15 mm	Ta: 0.034
BS TS15	(0.0005)	.	(0.001)	71.4	0.009	(0.018)	.	.	.	11.6	.	(0.003)	Disc 38 mm Ø x ~7 or 19+ mm	17034
12X 12749X	.	.	.	.	.	.	0.016	.	.	0.036	.	.	Disc ~40 mm Ø x ~15 mm	
DSZU C050	(0.002)	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm	
DSZU C043A	(0.001)	.	0.0004	.	0.006	.	.	.	.	0.092	.	.	Disc 40 mm Ø x 25 mm	
KUT B2/2	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x 39 mm	
12X 12746V	.	.	.	.	.	.	.	.	.	0.105	.	.	Disc ~40 mm Ø x ~15mm	
IARM 168A	0.0004	.	.	.	0.003	0.0008	(<0.01)	.	.	0.52	.	.	Disc 31 mm Ø x 2 mm	
BS 4150MOD-A	(0.0004)	.	(0.0007)	96.7	(0.002)	0.0017	(0.0004)	(0.002)	.	0.0026	.	(0.0005)	Disc 38 mm Ø x ~7 or 19+ mm	17034
IARM FEM4-18	.	.	.	79.0	.	.	.	.	.	5.55	.	.	Disc ~38 mm Ø x ~3 or ~19 mm	
12X LA1B	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
VS UG145	0.0019	0.0052	0.0006	.	0.102	.	0.021	.	.	0.162	0.0017	0.008	Disc ~37 mm Ø x ~20 mm	
CZ CM-6A	0.015	.	.	.	0.028	.	0.017	0.03	.	0.04	.	0.04	Disc ~39 mm Ø x 25 mm	
IARM 251A	(0.002)	.	(0.0005)	.	0.016	(0.01)	(0.002)	.	.	5.5	.	(0.002)	Disc 31 mm Ø x 2 mm	
SRM 1138a	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 13 mm	
SS 603/2	.	.	.	.	.	.	.	.	.	.	.	(<0.005)	Disc 44 mm Ø X 19 mm	
DSZU C070	.	.	.	.	.	.	.	.	.	0.29	.	.	Disc ~40 mm Ø x ~15 mm	

Number	B	Bi	Ca	Fe	Nb	O	Pb	Sb	Se	W	Zn	Zr	Units	Comment

SILICON STEEL

CONTINUED ON THE NEXT PAGE

= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	Si	C	Mn	P	S	Cu	Ni	Cr	Al	As	Co	Mo	N	Sn	Ti	V
2	CZ SST-4A	4.73	0.062	0.376	0.031	0.020	0.111	0.082	0.105	0.514	0.004	0.012	0.019	0.0058	0.025	0.035	0.031
2	CZ CM-12C	3.7	0.038	0.275	0.0103	0.0110	0.175	0.046	0.081	0.145	0.0030	0.0044	0.012	0.0056	(0.005)	0.0128	0.027
2	CZ SST-3A	3.27	0.035	0.221	0.007	0.0093	0.096	0.061	0.043	0.009	(0.003)	0.038	0.036	0.0088	0.015	0.009	0.041
1	ECRM 191-3D	3.226	0.0027	0.153	0.0097	0.0005	0.0097	0.0124	0.0242	0.81	0.0014	.	0.00127	0.00105	0.0013	0.0020	0.00043
1	SRM 1135	3.19	0.027	0.094	0.006	0.026	0.056	0.050	0.022	0.0028	.	.	0.014	.	0.004	.	<0.01
2	CZ SST-2A	3.07	0.083	0.160	0.026	0.0089	0.205	0.066	0.138	0.010	.	0.022	0.054	0.0078	0.055	0.016	0.024
1	SRM 1134	2.889	0.0261	0.2751	0.0276	0.0095	0.0707	0.0375	0.0198	(0.329)	.	.	0.0087	.	0.0034	.	.
2	CZ SST-1A	2.57	0.072	0.062	0.041	0.0043	0.654	0.155	0.209	0.061	(0.002)	0.005	(0.002)	0.0059	0.110	0.004	0.006
1	VS RG28/1	2.36	0.68	0.91	0.031	0.0071	0.040	0.168	0.194	0.068	.	0.072	0.104	.	.	0.022	0.035
1	14X MN5V	2.27	1.42	8.02	0.057	0.0207	0.551	3.09	3.28	0.145	.	.	2.26	0.0146	0.0278	0.51	0.0810
1	14X MN2S	2.20	0.80	12.3	0.024	0.0080	0.089	0.726	0.364	0.020	.	.	1.08	0.038	0.0150	0.018	0.089
2	BS 38C	2.08	0.60	0.81	0.011	0.012	0.26	0.24	0.28	0.015	0.011	0.036	0.41	0.0081	0.022	0.007	0.214
1	12X 15251U	2.05	1.017	0.910	0.0253	0.0215	0.1194	0.896	0.612	0.1085	.	0.228	0.205	0.0031	0.0108	.	0.391
1	VS UG146	1.99	0.77	2.42	(0.05)	0.028	0.593	1.39	0.186	0.017	0.056	0.0128	0.271	0.017	.	0.075	0.062
1	VS UG92	1.98	0.69	0.79	0.05	0.0029	0.111	0.155	0.200	0.091	0.0027	.	0.119	0.016	.	0.022	0.024
1	KUT T4/1	1.97	0.17	0.23	0.012	0.041	0.16	0.077	0.24	.	.	.	.	.	.	(<0.005)	.
1	IARM 47B	1.96	0.59	0.79	0.017	0.006	0.17	0.090	0.23	0.014	.	0.007	0.20	0.0092	0.08	0.010	0.17
2	CZ CM-2B	1.95	0.247	0.894	0.082	0.0114	0.99	1.20	1.53	0.046	0.12	0.45	0.33	0.0062	0.091	0.342	0.109
1	DSZU C047A	1.94	0.789	0.411	0.022	0.0107	0.150	0.311	4.76	0.054	(0.0095)	0.105	0.76	0.022	0.0104	0.0096	1.21
1	DSZU C080	1.89	1.68	0.31	0.025	0.020	0.120	0.162	5.06	.	.	0.028	0.39	.	.	.	5.12
1	ECRM 196-2D	1.808	0.0060	0.364	0.00369	0.00065	0.0057	0.0401	0.0282	0.2167	0.00033	0.0138	0.0142	0.00178	0.00047	0.00253	0.00368
1	VS UG4/5	1.80	0.56	1.26	(0.008)	(0.006)	0.098	0.68	0.17	0.010	.	.	0.087	.	.	0.17	0.054
1	VS UG1/11	1.74	0.61	0.667	0.0098	0.011	0.155	0.080	0.108	0.032	.	0.0195	0.0067	0.0100	0.0035	0.0047	.
1	ECRM 186-1D	1.72	0.610	0.870	0.022	0.035	0.281	0.190	0.218	0.014	.	.	0.048	.	.	.	.
1	BS 300A	1.71	0.416	0.716	0.0049	0.0008	0.118	1.87	0.798	0.098	0.0029	0.0087	0.38	0.0023	0.0065	0.0095	0.070
1	SS 405/1	1.71	0.032	1.28	0.018	0.069	0.013	0.22	0.15	.	.	.	(0.002)	.	.	.	0.28
1	IMZ 56/1	1.69	0.41	0.25	0.011	0.007	0.41	0.69	0.43	.	.	.	0.66	.	.	.	0.19
3	CZ CM-2A	1.66	0.20	0.97	0.10	0.012	1.01	1.20	1.50	0.03	0.11	0.43	0.33	.	0.08	0.34	0.10
1	BS 300B *	1.65	0.41	0.71	0.005	0.0007	0.067	1.86	0.79	0.040	0.003	0.012	0.40	<0.05	0.005	0.003	0.078
2	BS 4340M	1.65	0.414	0.74	0.004	<0.001	0.134	1.78	0.78	0.076	.	0.013	0.35	0.0020	0.009	.	0.056
1	IARM Fe300M-22	1.65	0.431	0.735	0.0046	(0.0008)	0.0713	1.90	0.773	0.051	0.0038	0.033	0.393	0.0018	0.0050	0.0018	0.075
1	VS UG111	1.64	0.52	0.625	0.0028	0.0035	0.065	0.036	0.058	0.049	.	.	0.039	.	.	0.025	0.058
1	IARM 340A	1.63	0.414	0.755	0.011	0.001	0.103	1.80	0.84	0.062	(0.004)	0.006	0.39	0.0020	0.005	0.0098	0.064
1	IARM 342A	1.63	0.257	1.37	0.006	0.0051	0.110	1.76	0.38	0.019	(0.006)	0.008	0.42	0.0102	0.021	0.0028	0.023
1	VS UG1/9	1.63	0.63	0.84	0.030	0.017	0.020	0.105	0.046	0.027	(0.001)	.	0.135	(0.002)	(0.002)	0.069	0.024
1	VS UG119	1.63	0.55	0.70	0.012	(0.02)	0.207	0.142	0.195	0.039	.	.	0.0113	0.0047	.	0.0030	.
1	VS UG4/10	1.61	0.695	0.834	0.031	0.0060	0.050	0.156	0.130	0.064	.	.	0.089	0.0192	.	0.0044	0.0239
1	KUT B1/1	1.58	0.97	0.205	0.017	0.032	0.14	3.96	1.66	.	.	.	.	.	.	.	.
1	BS 6418	1.54	0.255	1.41	(0.010)	0.0041	0.109	1.74	0.34	0.029	(0.004)	0.010	0.42	0.007	(0.006)	0.0036	(0.003)
1	14X MN5U	1.47	1.36	8.78	0.0552	0.0273	0.691	2.10	3.18	0.0257	.	.	1.93	0.0231	0.0228	0.93	0.0490

#	Number	Si	C	Mn	P	S	Cu	Ni	Cr	Al	As	Co	Mo	N	Sn	Ti	V
2	BS 19A	1.46	1.57	8.76	0.092	0.009	0.51	1.48	3.75	0.057	.	0.014	1.97	0.039	0.037	.	0.10
1	SS 409/1	1.46	0.082	0.44	0.025	0.021	0.048	3.06	0.94	.	.	0.014	0.65	.	.	.	0.09
1	IMZ 52/1	1.38	0.41	0.25	0.012	(0.009)	0.094	2.35	0.12	.	.	.	(0.041)	.	.	.	.
1	SRM C1173	1.38	0.453	0.174	0.031	0.092	0.204	4.04	2.63	.	.	.	1.46	.	.	0.037	0.42
2	CZ CM-14C	1.352	0.586	1.723	0.0169	0.0266	0.365	1.141	1.316	0.226	0.0165	0.0306	0.432	0.0092	0.048	0.420	0.325
1	BS HiCal-1	1.29	0.271	1.00	(0.007)	0.0007	0.152	3.28	1.55	0.070	0.0022	0.0024	0.379	.	(0.0002)	0.0037	0.0027
2	CZ LA-3G	1.29	0.626	0.68	0.047	0.035	0.236	1.01	1.377	0.047	0.051	0.127	0.326	0.011	0.031	0.143	0.232
2	IARM 172A	1.29	0.78	0.010	0.007	0.004	0.40	0.025	3.52	0.39	(0.005)	0.006	0.014	0.0004	0.003	0.003	0.003
1	SRM 1173	1.28	0.423	0.19	0.033	0.092	0.204	4.06	2.70	.	.	.	1.50	.	.	.	0.42
2	BS 69B	1.27	0.258	1.28	0.008	0.013	0.086	1.71	0.28	0.024	.	0.035	0.39	0.0057	0.006	(0.002)	(0.002)
1	VS UG143	1.26	1.52	1.41	0.013	0.0039	0.112	2.61	0.241	0.320	0.0054	0.0171	0.046	0.0057	0.059	0.084	0.094
1	VS UG4/6	1.25	0.59	1.23	(0.003)	0.0008	0.169	0.47	0.400	0.032	(0.001)	(0.004)	0.083	(<0.0005)	0.017	0.131	0.051
1	VS UG1/5	1.23	0.62	0.79	(0.02)	(0.03)	(0.01)	0.048	0.069	0.022	.	.	0.061	.	.	0.045	0.070
1	DSZU C046	1.21	0.785	0.257	0.025	0.0153	0.211	1.47	2.67	0.47	0.0020	0.006	0.69	0.0099	0.0033	0.115	0.72
1	KUT A12	1.19	0.031	0.31	0.014	0.082	0.18	2.43	1.25	0.18	0.007	0.012	0.47	.	.	0.05	0.042
1	VS RG28	1.161	0.70	0.84	0.031	.	0.050	0.154	0.135	0.066	.	.	0.090	.	.	0.0041	0.022
2	BS A-10	1.15	1.41	1.75	0.016	0.022	0.016	1.82	0.24	0.006	.	(0.010)	1.53	.	.	.	(0.004)
1	IMZ 173	1.15	0.30	0.43	0.029	0.020	0.32	0.42	5.52	0.060	.	(0.013)	1.50	0.0342	0.012	(0.002)	0.47
1	BS H-13A	1.13	0.391	0.445	0.0187	(0.003)	0.083	0.139	5.11	(0.03)	0.0050	0.033	1.32	0.034	(0.005)	(0.03)	0.92
1	SS 404/2	1.121	0.696	0.532	0.0479	0.0228	0.427	0.393	0.774	0.017	.	.	0.307	0.0089	.	.	0.107
1	14X MN3U	1.11	1.09	10.2	0.0239	0.015	0.135	0.387	0.599	0.045	.	.	0.343	0.025	0.0254	(0.10)	0.022
1	DSZU C081	1.10	1.01	0.32	0.017	0.011	0.124	0.207	7.78	.	.	0.029	2.13	.	.	.	0.25
2	BS 34D	1.06	0.395	0.38	0.017	0.005	0.049	0.10	5.15	.	.	0.031	1.24	.	.	.	0.94
1	IMZ 102/3	1.06	1.11	0.15	0.014	(0.0045)	0.13	0.021	1.59	0.017	.	.	0.43	.	.	.	(0.012)
1	ECRM 274-1D	1.057	1.563	0.397	0.0148	0.0096	0.0281	0.077	8.036	(0.0025)	(0.0013)	(0.0230)	1.4551	0.0769	(0.0010)	(0.0011)	4.010
2	CT H13	1.05	0.39	0.30	0.015	0.005	0.061	0.10	5.23	.	.	.	1.36	.	.	.	1.02
1	ECRM 276-2D	1.034	0.399	0.365	0.0093	0.0189	0.183	0.203	4.975	.	.	.	1.134	0.0116	0.0133	.	0.296
2	BS 41	1.02	1.41	0.89	0.013	0.011	0.038	0.15	0.22	(0.007)	.	.	0.23	.	(0.008)	.	0.046
2	IARM 45A	1.02	1.39	0.88	0.014	0.012	0.049	0.11	0.13	0.011	(0.003)	0.004	0.25	0.0079	0.005	0.003	0.005
1	12X 15255R	1.01	0.392	1.09	0.080	0.067	0.288	0.317	1.49	0.161	.	0.045	0.113	0.0058	0.106	0.052	0.491
1	12X 15258P	1.01	0.392	1.23	0.067	0.032	0.109	0.497	0.631	0.087	.	0.310	0.361	.	0.071	0.100	0.378
1	BS A-11	0.98	2.42	0.507	0.023	0.123	0.092	0.25	5.21	0.0054	0.0057	0.044	1.25	0.110	0.0055	0.0019	9.24
2	BS 41A	0.97	1.50	0.93	0.004	0.001	0.034	0.17	0.20	0.010	0.002	0.006	0.19	0.0077	0.002	0.004	(0.003)
1	SS 603/2	0.97	0.79	0.236	0.020	0.056	(0.05)	(0.03)	(0.04)	0.076	.	(0.01)	(0.004)	.	.	.	(0.001)
1	VS UG120	0.96	0.096	0.685	0.027	(0.02)	0.447	0.634	0.75	0.011	.	.	.	(0.008)	.	.	0.0078
1	VS UG6/11	0.96	0.091	0.691	0.028	0.022	0.449	0.640	0.759	0.0107	.	0.0392	0.0082	0.0083	.	.	0.0075
1	14X MN4-21	0.95	0.897	13.80	0.058	0.0069	0.446	1.18	2.00	(0.2060)	0.007	0.014	0.832	0.082	0.077	0.056	0.042
1	14X MN1AL	0.944	0.597	22.08	0.053	0.0054	0.178	0.692	1.321	(0.23)	.	.	0.499	0.0585	0.0393	0.0346	0.0226
1	VS UG35/2	0.94	0.301	0.109	.	.	0.174	0.84	2.63	.	.	.	0.65	.	.	.	0.108
2	CZ CM-23A	0.934	0.917	0.803	0.0609	0.0348	0.234	0.230	3.064	0.323	0.0146	0.510	0.816	0.0149	0.059	0.154	0.157
1	SS 113	0.931	0.837	1.207	0.0595	0.0294	0.179	0.0784	1.248	0.0151	0.0020	0.0415	0.056	0.0109	0.0067	0.0390	0.201
1	IARM 255A	0.93	0.403	0.27	0.013	0.0012	0.049	0.083	4.84	0.01	(0.002)	0.009	1.33	0.0067	0.006	0.002	0.43
1	IMZ 174	0.93	0.33	0.32	0.029	0.023	0.17	0.13	5.10	0.080	.	0.011	1.24	0.0288	0.010	(0.001)	0.98
1	ECRM 271-1D	0.923	0.3698	0.437	0.0120	0.00045	0.1371	0.1552	5.002	0.0234	0.0057	0.0139	1.247	0.0137	0.0084	0.0020	0.850
2	BS 49	0.92	0.36	0.33	0.014	0.015	0.072	0.20	3.51	0.004	.	2.00	2.41	0.0186	(0.004)	0.003	0.62
2	BS TH12	0.92	0.372	0.40	0.020	0.005	0.064	0.16	5.02	.	.	0.07	1.41	.	.	.	0.62
2	IARM 45B	0.92	1.42	0.90	0.010	0.008	0.018	0.024	0.061	0.010	(0.002)	0.004	0.24	0.0080	0.008	0.002	(0.003)
1	BS PM15	0.912	3.54	0.416	0.0198	0.0127	0.142	0.203	5.33	0.0025	0.0040	0.0330	1.22	0.111	0.0034	0.0029	14.79
1	13X 14713A	0.911	0.0446	0.495	0.0203	0.0080	0.0368	0.122	7.17	0.551	.	0.0110	0.0266	0.0065	0.0034	0.0056	0.0411
1	IARM 255B	0.91	0.389	0.317	0.010	(0.002)	0.073	0.062	4.82	0.032	.	0.0090	1.30	(0.005)	(0.006)	.	0.515

#	Number	Si	C	Mn	P	S	Cu	Ni	Cr	Al	As	Co	Mo	N	Sn	Ti	V

SILICON STEEL **CONTINUED FROM THE PREVIOUS PAGE**

Number	B	Ca	Ce	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment
CZ SST-4A	0.0006	.	.	.	.	.	.	0.008	(0.003)	.	0.026	(0.002)	(0.003)	Disc ~37 mm Ø x 25 mm	
CZ CM-12C	0.0033	0.0010	.	.	.	0.0066	.	.	.	.	(0.004)	.	.	Disc ~37 mm Ø x ~25 mm	
CZ SST-3A	0.0019	.	.	.	.	.	.	0.013	.	.	0.016	0.011	.	Disc ~37 mm Ø x 25 mm	
ECRM 191-3D	0.00024	.	.	.	0.0036	.	.	.	.	.	.	.	.	Disc ~30 mm Ø x ~39 mm	
SRM 1135	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 31 mm Ø x 19 mm	
CZ SST-2A	0.0089	.	.	.	.	.	.	0.015	0.008	.	0.019	0.011	0.017	Disc ~37 mm Ø x 25 mm	
SRM 1134	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 31 mm Ø x 19 mm	
CZ SST-1A	0.0003	.	.	.	.	.	.	(0.002)	(0.002)	.	.	.	.	Disc ~37 mm Ø x 25 mm	
VS RG28/1	.	.	.	.	.	0.041	.	.	.	.	0.0041	.	.	Disc ~45 mm Ø x ~28 mm	
14X MN5V	.	.	.	.	.	0.041	.	.	.	(0.004)	.	.	.	Disc ~40 mm Ø x ~15 mm	
14X MN2S	.	.	.	.	.	0.23	.	.	.	(0.006)	.	.	.	Disc ~40 mm Ø x ~15 mm	
BS 38C	.	.	.	.	.	(0.002)	.	0.022	.	.	0.004	.	.	Disc 38 mm Ø x ~7 or 19+ mm	
12X 15251U	.	.	.	.	.	0.266	.	.	.	.	0.0393	.	.	Disc ~40 mm Ø x ~15 mm	
VS UG146	0.0019	0.0023	0.009	.	.	0.047	.	0.011	.	0.029	0.028	0.0098	.	Disc ~37 mm Ø x ~20 mm	Bi: 0.0038
VS UG92	.	.	.	.	.	0.034	.	0.00017	0.0005	.	.	.	.	Disc ~47 mm Ø x ~30 mm	Als: 0.08
KUT T4/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x 39 mm	last
IARM 47B	(<0.001)	.	.	.	.	(0.002)	(0.0014)	(0.0003)	.	.	(0.016)	.	.	Disc 31 mm Ø x 2 or 18 mm	
CZ CM-2B	0.0010	.	.	.	.	(0.58)	.	0.087	0.020	.	0.22	.	0.013	Disc ~37 mm Ø x ~25 mm	
DSZU C047A	0.0006	0.0022	.	.	.	0.020	.	.	.	.	2.37	.	.	Disc 40 mm Ø x 25 mm	
DSZU C080	.	.	.	.	.	.	.	.	.	.	3.40	.	.	Disc ~35 mm Ø x 20 or 25 mm	
ECRM 196-2D	0.00014	0.00071	.	.	0.00075	.	.	.	.	.	.	0.00019	.	Disc 38 mm Ø x 25 mm	
VS UG4/5	.	.	.	.	.	0.053	.	.	.	.	0.14	.	.	Disc ~45 mm Ø x ~28 mm	
VS UG1/11	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	
ECRM 186-1D	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm	
BS 300A	(0.00032)	0.0008	.	93.8	<0.0005	(0.002)	<0.01	<0.0005	0.0011	0.0022	<0.01	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm	17034
SS 405/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
IMZ 56/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
CZ CM-2A	0.0005	.	.	.	.	0.48	.	0.06	0.008	0.027	0.23	.	0.03	Disc ~39 mm Ø x 25 mm	last
BS 300B *	<0.005	<0.005	* Provisional Analysis			0.003	<0.005	<0.005	<0.05	<0.05	0.001	.	0.001	Disc 38 mm Ø x ~7 or 19+ mm	
BS 4340M	.	.	.	.	.	.	(0.001)	.	.	.	.	.	.	Disc 37 mm Ø x ~7 mm	last
IARM Fe300M-22	.	.	.	.	.	.	.	.	.	.	0.0115	.	.	disc	
VS UG111	.	.	.	.	.	.	.	.	.	.	0.056	.	.	Disc ~45 mm Ø x ~25 mm	
IARM 340A	0.0004	(0.0004)	.	.	(0.0002)	0.015	(0.001)	(0.001)	0.0021	.	(0.005)	(0.001)	(0.002)	Disc 31 mm Ø x 2 mm	
IARM 342A	0.0004	(0.0001)	.	.	(0.0002)	(0.002)	0.0006	0.0008	0.0021	.	(0.005)	(0.001)	(0.002)	Disc 31 mm Ø x 2 or 18 mm	
VS UG1/9	(0.0003)	.	.	.	.	0.124	.	(0.002)	.	.	0.063	.	.	Disc ~45 mm Ø x ~28 mm	
VS UG119	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~25 mm	
VS UG4/10	.	.	.	.	.	0.030	.	.	.	.	0.006	.	.	Disc ~45 mm Ø x ~28 mm	
KUT B1/1	.	.	.	.	.	.	.	.	.	.	.	.	0.001	Disc 30-35 mm Ø x 39 mm	
BS 6418	0.0004	0.0002	.	[94.1]	0.0004	0.0022	0.0011	<0.005	(0.003)	<0.05	<0.05	.	<0.005	Disc 57 mm Ø x ~7 or 19+ mm	17034
14X MN5U	.	.	.	.	.	0.102	.	.	.	(0.007)	.	.	.	Disc ~40 mm Ø x ~15 mm	

Number	B	Ca	Ce	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment
BS 19A	.	.	.	.	.	0.040	.	.	.	.	.	.	.	Disc 32 mm Ø x 17 mm	
SS 409/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
IMZ 52/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
SRM C1173	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm	
CZ CM-14C	0.0249	.	.	.	.	0.248	.	0.0090	0.0170	.	0.0238	.	0.037	Disc 37 mm Ø x 25 mm	
BS HiCal-1	(0.0001)	0.0140	.	[91.9]	(0.0003)	(0.002)	.	(0.0005)	.	.	(0.0009)	.	(0.0008)	Disc ~38 mm Ø x ~30 mm	17025
CZ LA-3G	0.0039	0.0016	.	.	.	0.071	.	0.0098	0.024	.	0.105	.	0.068	Disc ~37 mm Ø x ~25 mm	
IARM 172A	0.0003	(0.0001)	.	.	.	0.004	0.0006	(<0.01)	.	.	0.038	.	(<0.005)	Disc 31 mm Ø x 2 mm	
SRM 1173	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm	
BS 69B	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	
VS UG143	0.0010	0.0015	0.019	.	.	0.014	.	0.0074	0.010	.	0.48	0.013	0.198	Disc ~37 mm Ø x ~20 mm	BI: 0.008
VS UG4/6	.	.	.	.	.	(0.03)	.	(0.005)	(<0.0005)	.	0.111	.	.	Disc ~45 mm Ø x ~28 mm	
VS UG1/5	.	.	.	.	.	0.078	.	.	.	.	(0.01)	.	.	Disc ~45 mm Ø x ~28 mm	
DSZU C046	(0.0004)	0.0007	.	.	.	(0.005)	.	.	.	.	0.47	.	.	Disc 40 mm Ø x 25 mm	
KUT A12	.	.	.	.	.	(0.03)	.	.	0.013	.	.	.	.	Disc 30-35 mm Ø x 39 mm	
VS RG28	.	.	.	.	.	0.029	.	.	.	.	0.006	.	.	Disc ~45 mm Ø x ~28 mm	
BS A-10	.	.	.	.	.	.	.	.	.	.	<0.005	.	.	Disc 40 mm Ø x ~7 or 19+ mm	
IMZ 173	.	.	.	.	.	.	.	.	.	.	0.10	.	.	Disc 40 mm Ø x 40 mm	
BS H-13A	(0.0007)	(0.0006)	.	90.2	(0.0002)	0.0052	(0.016)	(0.0004)	(0.002)	.	0.100	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm	17034
SS 404/2	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
14X MN3U	.	.	.	.	.	0.398	.	.	.	0.010	.	.	.	Disc ~40 mm Ø x ~15 mm	
DSZU C081	.	.	.	.	.	.	.	.	.	.	0.05	.	.	Disc ~35 mm Ø x 25 mm	
BS 34D	.	.	.	.	.	.	.	.	.	.	0.10	.	.	Disc 41 mm Ø x ~7 mm	last
IMZ 102/3	(0.0007)	.	.	.	.	.	.	.	.	.	.	.	(0.007)	Disc 40 mm Ø x 40 mm	
ECRM 274-1D	(0.0005)	.	.	.	.	.	(0.0026)	(0.000064	(0.0002)	.	0.0087	.	.	Disc 38 mm Ø x 25 mm	
CT H13	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	
ECRM 276-2D	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm	
BS 41	.	.	.	.	.	.	.	.	.	.	0.035	.	.	Disc 42 mm Ø x ~7 or 19+ mm	17025
IARM 45A	(0.0001)	.	.	.	.	0.002	(0.0017)	(<0.005)	.	.	.	.	.	Disc 31 mm Ø x 2 mm	
12X 15255R	.	.	.	.	.	0.203	.	.	.	0.034	0.143	.	(0.011)	Disc ~40 mm Ø x ~15 mm	
12X 15258P	0.0100	.	.	.	.	0.133	.	.	.	(0.002)	0.125	.	.	Disc ~40 mm Ø x ~15 mm	
BS A-11	0.0008	(0.0002)	.	79.5	(0.0005)	(0.0070)	0.028	(0.00006)	(0.001)	.	(0.080)	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm	17025
BS 41A	.	0.0006	.	.	.	.	0.002	.	.	.	(<0.003)	.	.	Disc 38 mm Ø x ~7 or 19+ mm	ISO 25
SS 603/2	.	.	.	.	.	.	.	.	.	.	.	.	(<0.005)	Disc 44 mm Ø X 19 mm	
VS UG120	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~25 mm	
VS UG6/11	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	
14X MN4-21	(0.0029)	.	.	Rem	.	0.182	(0.0026)	.	.	(0.0104)	0.005	.	.	Disc ~40 mm Ø x ~15 mm	
14X MN1AL	.	.	.	.	.	0.096	.	.	.	(0.011)	.	.	.	Disc ~40 mm Ø x ~15 mm	
VS UG35/2	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~28 mm	
CZ CM-23A	0.0129	0.0004	.	.	.	0.628	.	0.0034	0.137	(0.051)	0.104	0.0250	0.137	Disc 37 mm Ø x 25 mm	
SS 113	0.0066	.	.	.	.	0.0487	.	.	.	.	0.012	.	0.0029	Disc 44 mm Ø x 19 mm	
IARM 255A	0.0004	(0.0004)	.	.	.	0.004	0.0011	<0.001	.	.	0.007	.	<0.005	Disc 31 mm Ø x 2 mm	
IMZ 174	.	.	.	.	.	.	.	.	.	.	0.021	.	.	Disc 40 mm Ø x 40 mm	
ECRM 271-1D	.	0.0009	.	.	.	.	0.0020	.	.	.	0.0054	.	.	Disc 35 mm Ø x 25 mm	
BS 49	.	.	.	.	.	.	.	.	.	.	0.31	.	.	Disc 49 mm Ø x ~7 or 19+ mm	
BS TH12	.	.	.	.	.	.	.	.	.	.	1.06	.	.	Disc 38 mm Ø x ~7 mm	last
IARM 45B	(0.0001)	(0.001)	.	.	.	(0.002)	(0.0005)	.	(0.001)	.	(0.004)	.	(0.001)	Disc 31 mm Ø x 2 or 18 mm	
BS PM15	(0.0002)	(0.0001)	.	[73.0]	(0.0002)	0.014	0.0129	(0.00001)	(0.0010)	(0.0003)	0.109	.	(0.0005)	Disc 38 mm Ø x 19+ mm	17025
13X 14713A	.	.	.	.	0.0016	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
IARM 255B	.	.	.	.	.	(0.006)	.	.	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm	

Number	B	Ca	Ce	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment

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= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V
1	VS UG143	1.52	1.41	0.013	0.0039	1.26	0.112	2.61	0.241	0.320	.	0.0054	0.046	0.0057	0.059	0.084	0.094
1	VS UG0/9	1.33	0.208	0.0040	0.0045	0.170	0.307	0.36	0.55	0.139	.	(0.001)	0.024	0.0022	(0.0008)	0.029	0.0087
1	VS UG0/10	1.321	0.268	0.0090	0.0044	0.244	0.265	0.353	0.596	0.101	.	.	0.052	0.0120	0.0043	0.017	0.0037
1	VS UG0/5	1.32	(0.2)	(0.01)	(0.007)	(0.2)	0.265	0.351	0.60	0.108	.	.	(0.05)	.	.	(0.01)	(0.01)
1	SS 402/2	1.311	0.288	0.0161	0.0138	0.111	0.302	0.808	0.652	0.161	.	.	0.140	0.0069	.	.	0.194
1	IMZ 65/2	1.19	0.27	0.013	0.007	0.13	0.059	0.067	0.079	0.030	.	.	.	.	.	.	.
1	DSZU C049	1.17	0.237	0.0166	0.0147	0.227	0.069	0.044	0.131	(0.005)	.	(0.004)	(0.002)	(0.007)	(0.004)	(0.003)	(0.003)
1	KUT A18	1.16	(1.99)	0.014	0.007	0.15	0.066	0.125	0.90	(0.02)	.	0.003	.	.	0.016	0.011	0.10
1	VS UG0/11	1.16	0.196	0.0054	0.0078	0.233	0.134	0.114	0.163	0.009	.	.	0.011	0.005	0.0051	0.0041	0.0035
2	CZ LA-4D	1.143	1.266	0.028	0.0091	0.181	0.066	0.367	1.83	0.067	.	0.010	0.136	0.0064	0.014	0.0154	0.103
3	CZ CM-5B	1.09	1.28	0.021	0.012	0.39	0.13	0.23	2.07	0.083	.	0.018	0.10	0.0135	0.012	0.02	0.06
1	IARM 196A	1.08	2.40	0.040	0.014	0.35	0.25	0.61	2.35	0.015	.	0.025	0.129	0.0084	0.033	0.014	0.157
2	CZ CM-5C	1.04	1.17	0.029	0.021	0.54	0.151	0.42	2.45	0.063	.	0.020	0.132	0.014	0.018	0.031	0.106
1	VS UG9/9	1.04	0.310	0.0053	0.021	0.319	0.163	0.242	0.310	0.073	.	(0.003)	0.308	0.0027	(0.001)	0.130	0.215
1	IARM 49E	1.03	0.364	(0.006)	(0.002)	0.248	0.076	0.043	1.43	0.024	.	0.0029	0.017	(0.003)	0.0065	0.0060	0.066
1	12X 52986A	1.023	0.372	0.0049	0.0011	0.246	0.077	0.0411	1.418	0.0258	.	(0.002)	0.0169	(0.002)	0.0063	.	0.0615
2	BS 53MOD	1.01	0.36	0.011	0.012	0.26	0.070	0.072	1.37	0.019	.	0.004	0.024	0.0086	0.008	.	0.005
1	NILAB 100LA D	1.002	0.333	0.012	0.018	.	0.019	0.027	1.517	0.005	.	0.004	0.012	0.0046	.	0.0007	0.004
1	BS E52100	0.99	0.371	0.011	0.004	0.270	0.090	0.066	1.54	0.019	.	0.0033	0.0209	0.0057	0.0049	(0.0010)	0.0046
2	BS A485-1	0.98	1.10	0.019	0.004	0.62	0.16	0.13	1.07	0.017	.	0.006	0.029	0.0060	0.011	0.003	0.003
1	KUT B15	0.98	0.69	0.030	0.031	0.80	0.14	0.15	3.70	0.13	.	.	1.20	.	.	(0.32)	(0.33)
1	VS UG75	0.98	0.286	0.0127	0.0089	0.248	0.111	0.201	1.43	(0.03)	.	.	(0.01)	.	.	(0.001)	(0.006)
1	VS UG127	0.962	0.93	0.020	0.029	0.427	0.145	0.151	0.188	0.0051	.	.	.	0.0155	.	0.0094	0.141
1	VS UG9/11	0.94	0.895	0.027	0.0085	0.312	0.163	0.354	0.985	(0.04)	.	.	0.094	0.0119	0.0064	0.010	0.048
1	12X 19965A	0.936	0.600	0.0196	0.0081	0.247	0.148	0.141	1.713	0.0256	.	.	0.210	0.0087	0.0070	.	0.0087
1	SS 401/2	0.935	1.19	0.026	0.0078	0.60	0.101	0.019	0.138	0.074	.	.	0.49	0.0159	.	.	0.496
1	IMZ 119	0.93	1.15	0.018	0.006	0.16	0.042	0.049	0.062	0.010	0.007	.	.	0.0086	.	(0.0007)	0.006
1	VS UG89	0.92	0.76	0.0085	0.01	0.385	0.373	0.51	0.420	0.01	0.007	0.0043	0.044	0.017	.	0.012	0.021
1	VS UG126	0.856	0.78	0.0128	0.0077	0.348	0.030	0.029	0.591	0.0015	.	.	.	0.0123	.	.	0.075
1	VS UG21/6	0.83	0.74	(0.02)	(0.02)	0.312	0.346	0.47	0.50	.	.	.	.	.	.	.	.
1	VS UG130	0.80	0.228	0.0078	0.0071	0.226	0.252	0.104	0.258	.	.	0.0093	.	.	.	.	.
1	VS UG146	0.77	2.42	(0.05)	0.028	1.99	0.593	1.39	0.186	0.017	.	0.056	0.271	0.017	.	0.075	0.062
1	ECRM 195-1D	0.757	0.571	0.017	0.012	0.467	0.036	0.33	1.56	.	.	.	0.77	0.010	.	.	0.31
1	SS 403/2	0.750	1.677	0.055	0.0381	0.209	0.221	0.223	0.463	0.0485	.	.	0.088	(0.010)	.	.	0.341
1	IMZ 64/2	0.75	0.47	0.012	(0.005)	0.22	0.12	0.081	0.090	0.020	.	.	.	.	.	.	.
2	CZ CM-1D	0.735	1.80	0.0218	0.026	0.341	0.186	0.547	0.456	0.024	.	.	0.100	0.0124	0.0144	0.054	0.089
1	VS UG8/11	0.728	1.97	0.036	0.0019	0.31	0.160	0.291	1.74	(0.01)	.	.	0.622	0.0138	0.0058	.	0.181
2	CZ CM-4B	0.72	0.50	0.023	0.012	0.80	0.40	1.40	2.23	0.025	.	0.015	0.33	0.013	0.028	0.12	0.18
1	IMZ 118	0.69	1.72	0.026	(0.049)	0.30	0.18	0.19	0.14	(0.014)	(0.004)	.	0.058	0.0120	0.22	.	0.059
1	12X LA5D	0.681	0.855	0.040	0.016	0.53	0.107	0.409	0.291	0.177	.	0.0101	0.206	.	0.0142	0.080	0.603
1	IMZ 116	0.64	0.94	0.025	0.035	0.25	0.33	0.022	0.72	0.025	0.012	.	0.074	0.0130	.	(0.0008)	0.076
1	SS 115	0.6224	0.682	0.0123	0.00093	0.2078	.	0.0196	0.0198	0.0527	.	.	.	0.0067	.	0.0027	.
1	VS UG1/11	0.61	0.667	0.0098	0.011	1.74	0.155	0.080	0.108	0.032	.	.	0.0067	0.0100	0.0035	0.0047	.

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment
VS UG143	0.0010	0.008	0.0015	0.019	0.0171	.	.	0.014	.	0.0074	0.010	.	0.48	0.013	0.198	Disc ~37 mm Ø x ~20 mm	
VS UG0/9	(0.0002)	.	.	.	.	.	.	0.041	.	(0.002)	.	.	0.074	.	.	Disc ~45 mm Ø x ~28 mm	last
VS UG0/10	.	.	.	.	.	.	.	0.0033	.	.	.	.	(0.006)	.	.	Disc ~45 mm Ø x ~28 mm	
VS UG0/5	.	.	.	.	.	.	.	(0.01)	.	.	.	.	(0.01)	.	.	Disc ~45 mm Ø x ~28 mm	
SS 402/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
IMZ 65/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
DSZU C049	(0.0002)	.	(0.003)	.	(0.003)	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm	
KUT A18	(0.011)	.	.	.	.	.	.	0.035	.	.	0.005	.	.	.	.	Disc 30-35 mm Ø x 39 mm	
VS UG0/11	.	.	.	.	0.0109	.	.	.	.	.	.	.	0.0032	.	.	Disc ~45 mm Ø x ~28 mm	
CZ LA-4D	.	.	.	.	0.037	.	.	0.0046	.	0.040	.	.	0.025	.	.	Disc ~37 mm Ø x ~25 mm	
CZ CM-5B	0.002	.	.	.	0.022	.	.	0.015	.	0.01	0.006	.	0.03	.	0.09	Disc ~39 mm Ø x 25 mm	
IARM 196A	0.0017	.	0.0002	.	0.013	.	.	0.087	0.0021	0.001	0.006	.	0.189	.	0.006	Disc 31 mm Ø x 18 mm	
CZ CM-5C	0.0012	.	(0.0006)	.	0.022	.	.	0.014	.	0.009	0.005	.	0.034	.	(0.07)	Disc ~39 mm Ø x 25 mm	
VS UG9/9	(0.0002)	.	.	.	.	.	.	0.0046	.	(0.002)	.	.	1.60	.	.	Disc ~45 mm Ø x ~28 mm	
IARM 49E	.	.	.	.	(0.006)	.	.	(0.003)	(0.002)	.	.	.	.	.	.	Disc 31 mm Ø X 2 or 18 mm	
12X 52986A	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm	
BS 53MOD	.	0.102	(0.001)	.	0.007	.	.	.	(0.002)	0.0005	.	.	.	.	.	Disc 38 mm Ø x ~12 to 19 mm	
NILAB 100LA D	.	.	.	.	0.007	.	.	.	.	.	.	.	.	.	.	Disc 34 mm Ø x 20 mm	
BS E52100	.	.	0.0006	.	0.0067	96.6	<0.0005	(0.0010)	0.0009	<0.0005	0.0011	.	(0.0015)	.	<0.005	Disc 38 mm Ø x ~7 or 19+ mm	17034
BS A485-1	.	.	.	.	0.010	.	.	.	(0.0008)	.	.	.	.	.	.	Disc 39 mm Ø x ~7 or 19+ mm	
KUT B15	.	.	.	.	0.21	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x 39 mm	
VS UG75	.	.	.	.	.	.	.	(0.01)	.	.	.	.	(0.02)	.	.	Disc ~40 mm Ø x ~26 mm	
VS UG127	.	0.011	.	.	.	.	.	.	.	0.0049	.	.	.	.	.	Disc ~38 mm Ø x ~20 mm	
VS UG9/11	.	.	.	.	.	.	.	.	.	.	.	.	1.27	.	.	Disc ~45 mm Ø x ~28 mm	
12X 19965A	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0008	.	Disc ~41 mm Ø x ~15 mm	
SS 401/2	.	.	.	.	0.0042	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
IMZ 119	.	.	(0.0002)	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
VS UG89	.	.	.	.	.	.	.	0.0043	.	0.0003	0.0011	.	.	.	.	Disc ~47 mm Ø x ~30 mm	
VS UG126	.	0.0055	.	.	.	.	.	.	.	0.009	.	.	.	.	.	Disc ~38 mm Ø x ~20 mm	
VS UG21/6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	
VS UG130	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~39 mm Ø x ~25 mm	
VS UG146	0.0019	0.0038	0.0023	0.009	0.0128	.	.	0.047	.	0.011	.	0.029	0.028	0.0098	.	Disc ~37 mm Ø x ~20 mm	
ECRM 195-1D	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm	
SS 403/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
IMZ 64/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
CZ CM-1D	0.0017	.	.	.	0.029	.	.	0.050	.	.	0.0112	.	0.063	.	.	Disc ~37 mm Ø x ~25 mm	
VS UG8/11	.	.	.	.	.	.	.	.	.	.	.	.	0.70	.	.	Disc ~45 mm Ø x ~28 mm	
CZ CM-4B	0.017	.	.	.	0.115	.	.	0.071	.	0.022	0.052	.	0.116	0.007	.	Disc ~39 mm Ø x 25 mm	
IMZ 118	.	.	(0.0002)	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
12X LA5D	.	.	.	.	0.151	.	.	0.0039	.	.	.	.	(0.004)	(0.005)	0.0013	Disc ~40 mm Ø x ~15 mm	
IMZ 116	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
SS 115	.	.	0.0058	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
VS UG1/11	.	.	.	.	0.0195	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment

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= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V
1	IMZ 120	0.60	0.40	(0.049)	0.026	0.34	0.10	0.085	0.20	0.033	.	0.065	.	0.0115	0.008	.	.
1	VS UG96	0.60	0.52	0.0046	0.0029	0.290	0.256	0.396	0.399	0.031	.	.	0.0042	.	.	0.0025	0.0030
1	VS UG119	0.55	0.70	0.012	(0.02)	1.63	0.207	0.142	0.195	0.039	.	.	0.0113	0.0047	.	0.0030	.
1	12X 10550A	0.549	0.685	0.0184	0.0055	0.281	0.0290	0.0247	0.338	0.0325	.	0.0059	0.0086	0.0051	0.0018	.	.
1	IMZ 103D	0.54	0.77	0.060	0.050	0.43	0.263	0.59	0.573	0.021	.	0.005	0.180	0.0044	0.003	0.20	0.187
1	12X LA4B	0.537	0.303	0.0363	0.039	0.335	0.334	0.521	0.499	0.057	.	.	0.489	0.0222	.	.	0.328
1	12X 61500A	0.530	0.912	0.0104	0.0102	0.240	0.157	0.0976	1.023	(0.007)	.	0.0067	0.0195	.	0.0114	.	0.110
2	CZ CM-6A	0.52	0.37	0.016	0.058	0.27	0.05	0.19	0.37	0.02	.	0.025	0.04	0.009	0.017	0.03	0.05
1	ECRM 055-2D	0.5199	0.687	0.0102	0.0205	0.3094	0.2089	0.3121	0.3217	.	.	0.0187	0.0960	0.01069	0.0162	0.00104	0.00245
2	CZ BO-2B	0.515	0.745	0.0093	0.0016	0.309	0.100	0.057	0.212	0.0196	.	0.0057	0.006	0.004	0.0062	0.0017	(0.001)
1	IARM Fe6150-22	0.512	0.813	0.026	0.0024	0.303	0.135	0.098	0.912	0.027	.	0.0060	0.0170	0.0100	0.0069	0.0014	0.161
1	NCS HS13752	0.51	0.99	0.027	0.011	0.21	.	.	0.67	.	.	.	0.27	.	.	0.006	0.09
1	BS 4150MOD-A	0.503	1.12	0.0172	0.062	0.253	0.192	0.095	0.799	0.0023	.	0.0038	0.170	0.0081	0.0090	0.0018	0.029
1	12X LA3C	0.500	1.693	0.0274	0.0442	0.163	0.213	0.280	0.375	0.0410	.	0.0301	0.303	0.0039	.	.	0.157
2	BS 4941	0.490	0.79	0.012	0.017	0.27	0.106	0.074	0.96	0.024	.	(0.004)	0.039	0.0076	0.006	.	0.164
1	SS 407/2	0.490	0.195	0.038	0.0105	0.66	0.397	0.527	3.03	0.040	.	.	0.83	(0.011)	.	.	0.19
1	IMZ 117	0.49	0.77	0.038	0.015	0.34	0.41	0.29	0.94	0.023	0.013	.	0.024	0.0154	.	(0.0014)	0.087
2	BS 4150MOD	0.47	0.90	0.024	0.079	0.21	0.19	0.15	1.01	0.012	.	0.005	0.21	0.0087	0.013	(0.002)	0.008
1	VS UG144	0.465	0.141	0.022	0.071	0.86	0.064	4.98	0.412	0.069	.	0.018	0.136	0.011	0.027	0.293	0.143
1	12X 15266V	0.455	1.240	0.0344	0.0258	0.674	0.226	1.317	3.49	0.526	.	0.0640	0.298	.	0.0082	.	0.106
1	12X 41400B	0.452	0.764	0.0095	0.041	0.32	0.161	0.156	0.999	0.0137	.	0.015	0.177	0.0124	0.0099	.	.
1	12X 41450A	0.446	1.011	0.0093	0.0031	0.261	0.1318	0.187	1.194	0.0220	.	0.0053	0.340	0.0080	0.0090	.	0.0385
1	VS UG5/11	0.445	0.64	0.010	0.0037	0.29	0.146	1.40	0.912	.	.	.	0.269	0.0119	0.0047	.	0.148
1	DSZU C051	0.443	0.795	0.0162	0.029	0.293	0.140	0.041	0.048	(0.010)	.	(0.002)	.	.	(0.004)	(0.001)	(0.002)
2	BS XCCV	0.44	1.75	0.012	0.024	0.28	0.015	0.019	0.041	0.033	.	0.0023	0.007	0.0056	(0.0004)	(0.002)	(<0.003)
2	CZ LA-5C	0.439	1.87	0.017	0.0088	0.394	0.138	2.59	3.815	0.081	.	0.026	0.86	0.024	0.031	0.048	0.536
1	12X 14072A	0.430	0.680	0.0151	0.0061	0.322	0.203	0.136	1.061	0.0039	.	.	0.573	0.0103	(0.011)	.	0.301
1	BS 4140C	0.43	0.922	0.010	0.026	0.29	0.260	0.131	0.94	0.0215	.	0.0052	0.169	0.0064	0.0095	0.0009	0.0026
1	IMZ 54/1	0.43	0.14	(0.009)	0.010	0.17	(0.034)	4.01	0.12	.	.	.	(0.007)	.	.	.	0.19
1	NM PC-4	0.43	0.80	0.043	0.045	0.34	.	.	0.26	.	.	.	.	.	.	.	.
1	IARM 305B	0.425	0.58	0.011	0.014	0.349	0.214	0.156	1.63	0.92	.	(0.006)	0.32	0.0044	0.011	0.0044	0.004
1	IARM 30H	0.425	0.937	0.015	0.022	0.253	0.131	0.063	0.97	0.020	.	0.0046	0.199	0.0081	0.008	(0.0024)	(0.0040)
2	PV 101/1	0.424	0.798	0.014	0.027	0.177	0.108	0.091	1.013	.	.	.	0.099	.	.	.	.
1	BS 4340A	0.423	0.766	0.0062	(0.0008)	0.253	0.128	1.80	0.879	0.031	.	0.0059	0.259	0.0102	0.0081	(0.0011)	0.0024
1	IARM 252D	0.423	0.842	0.0075	0.0128	0.256	0.270	0.424	0.468	0.024	.	0.0053	0.204	0.0068	0.012	0.0012	0.0022
1	12X 43400A	0.422	0.592	0.0164	0.0284	0.259	0.177	1.378	1.181	0.013	.	0.0084	0.223	0.0089	0.007	.	.
2	CZ CM-16B	0.421	0.762	0.0508	0.0376	0.574	0.296	0.733	0.635	0.128	.	0.065	0.424	0.0154	0.0289	0.121	0.272
1	BS 4340B	0.42	0.658	0.0078	0.016	0.283	0.170	1.85	0.81	0.022	.	0.009	0.235	0.0060	0.008	0.0019	0.0033
2	HRT FE2015-N	0.42	0.83	0.007	0.028	0.24	0.15	0.32	1.03	0.023	.	.	0.21	0.0057	.	.	0.006
1	BS 4340	0.418	0.695	0.0119	0.0187	0.279	0.149	1.79	0.807	0.028	.	0.0043	0.231	0.0080	0.0063	0.0014	0.0033
1	IARM 252C	0.416	0.92	0.025	0.008	0.248	0.109	0.505	0.501	0.017	.	0.004	0.205	0.0083	0.007	0.001	0.005
1	BS 300A	0.416	0.716	0.0049	0.0008	1.71	0.118	1.87	0.798	0.098	.	0.0029	0.38	0.0023	0.0065	0.0095	0.070

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment
IMZ 120	.	.	.	.	.	.	.	.	.	0.077	0.031	.	.	.	.	Disc 40 mm Ø x 40 mm	
VS UG96	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~28 mm	
VS UG119	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~25 mm	
12X 10550A	.	.	.	.	.	.	.	.	.	.	.	.	.	(0.0016)	.	Disc ~40 mm Ø x ~15 mm	
IMZ 103D	0.010	.	.	.	0.010	.	.	0.042	.	.	.	.	.	.	.	Disc 38 mm Ø x 20 mm	
12X LA4B	.	.	.	.	0.105	.	.	.	.	.	.	.	0.091	.	.	Disc 42 mm Ø x 15 mm	last
12X 61500A	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0055	.	Disc ~38 mm Ø x ~15 mm	
CZ CM-6A	0.015	.	.	.	0.03	.	.	0.028	.	0.017	0.03	.	0.04	.	0.04	Disc ~39 mm Ø x 25 mm	
ECRM 055-2D	.	.	.	.	0.0257	.	.	.	.	.	0.00376	.	0.0166	.	.	Disc 38 mm Ø x 25 or 30 mm	
CZ BO-2B	.	.	(0.0008)	.	0.0055	.	.	.	.	.	.	.	(0.005)	.	.	Disc ~37 mm Ø x ~25 mm	
IARM Fe6150-22	.	.	0.0014	.	0.0081	.	.	.	0.0014	.	0.0016	.	0.007	.	.	Disc 38 mm Ø x 3 or 19 mm	
NCS HS13752	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 38 mm	
BS 4150MOD-A	(0.0004)	.	(0.0007)	.	0.0070	96.7	(0.0004)	(0.002)	0.0017	(0.0004)	(0.002)	.	0.0026	.	(0.0005)	Disc 38 mm Ø x ~7 or 19+ mm	17034
12X LA3C	.	.	.	.	0.0475	.	.	.	.	(0.004)	.	.	.	(0.004)	0.0197	Disc ~40 mm Ø x ~15 mm	
BS 4941	.	.	(0.0002)	.	0.008	.	.	.	0.0017	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	
SS 407/2	.	.	.	.	0.0068	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
IMZ 117	.	.	(0.0002)	.	.	.	.	0.041	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
BS 4150MOD	.	0.070	0.0010	.	0.012	.	.	.	(0.003)	0.0010	.	.	.	.	.	Disc 38 mm Ø x ~7 mm	last
VS UG144	0.0043	.	.	0.004	0.0245	.	.	0.018	.	0.0017	(0.01)	.	1.32	0.0012	0.068	Disc ~37 mm Ø x ~20 mm	
12X 15266V	.	.	.	.	0.286	.	.	1.438	.	.	.	0.116	.	.	.	Disc ~40 mm Ø x ~15 mm	
12X 41400B	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0012	.	Disc ~38 mm Ø x ~20 mm	
12X 41450A	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm	
VS UG5/11	.	.	.	.	0.0195	.	.	.	.	.	.	.	0.049	.	.	Disc ~45 mm Ø x ~28 mm	
DSZU C051	.	.	.	.	(0.003)	.	.	(0.001)	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm	
BS XCCV	.	.	.	.	0.006	.	.	(<0.002)	(0.0018)	(<0.0006)	(0.0003)	.	.	.	(<0.002)	Disc 36 mm Ø x ~7 or 19+ mm	
CZ LA-5C	.	.	.	.	0.088	.	.	0.057	.	0.015	0.018	.	0.631	(0.013)	.	Disc ~37 mm Ø x 25 mm	
12X 14072A	.	.	.	.	0.0098	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm	
BS 4140C	(0.0007)	.	0.0010	.	0.0078	96.8	(0.0008)	0.0019	0.0011	(0.0006)	0.0021	(0.01)	(0.003)	.	(0.0009)	Disc 38 mm Ø x ~7 or 19+ mm	17034
IMZ 54/1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
NM PC-4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm	last
IARM 305B	0.0006	.	0.0007	.	0.007	.	(0.002)	0.002	0.0006	(0.0003)	(0.004)	.	(0.004)	(0.002)	0.0011	Disc 31 mm Ø X 2 or 18 mm	
IARM 30H	(0.0007)	(0.002)	(0.0009)	.	0.0071	.	(0.001)	(0.003)	(0.0016)	(0.0005)	0.0013	.	(0.007)	(0.002)	(0.002)	Disc 31 mm Ø X 2 or mm	
PV 101/1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm	
BS 4340A	(0.0002)	.	(0.0002)	.	0.0111	95.4	0.0004	(0.002)	0.0007	(0.0003)	(0.0018)	.	0.0005	.	0.0016	Disc 38 mm Ø x ~7 or 19+ mm	17025
IARM 252D	(0.0002)	(0.0005)	(0.001)	.	0.0078	.	(0.0002)	0.0013	(0.0013)	(0.0004)	0.0024	.	(0.004)	(0.0005)	(0.0013)	Disc 31 mm Ø x 2 mm	
12X 43400A	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0027	.	Disc ~40 mm Ø x ~15 mm	
CZ CM-16B	0.0128	(0.045)	0.00033	.	0.058	.	.	0.094	.	0.0294	0.0282	.	0.141	0.0156	0.102	Disc 37 mm Ø x 25 mm	
BS 4340B	<0.005	.	<0.005	.	0.014	95.5	0.0002	(0.0021)	0.0009	<0.005	0.0017	.	(0.0028)	.	(0.0006)	Disc 38 mm Ø x ~7 or 19 mm	17034
HRT FE2015-N	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 20 mm	
BS 4340	(0.0002)	.	0.0005	.	0.0068	95.5	(0.0002)	(0.001)	0.0012	(0.0002)	(0.0013)	.	0.0012	.	0.0005	Disc 38 mm Ø x ~7 mm	17025
IARM 252C	(0.0001)	.	(0.0003)	.	0.008	.	.	0.002	(0.002)	0.001	<0.005	.	<0.005	.	<0.002	Disc 31 mm Ø x 2 mm	
BS 300A	(0.00032)	.	0.0008	.	0.0087	93.8	<0.0005	(0.002)	<0.01	<0.0005	0.0011	0.0022	<0.01	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm	17034

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment

LOW ALLOY STEEL CHART 3 of 8

= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V
2	BS 4942	0.414	0.56	0.015	0.021	0.22	0.165	0.16	0.97	(0.004)	.	0.005	0.54	0.0080	0.014	.	0.28
1	IARM 340A	0.414	0.755	0.011	0.001	1.63	0.103	1.80	0.84	0.062	.	(0.004)	0.39	0.0020	0.005	0.0098	0.064
1	IARM 252E	0.413	0.87	(0.009)	(0.012)	0.257	0.164	0.407	0.486	0.028	.	0.0046	0.204	0.0064	0.0075	0.0010	(0.0028)
1	IRSID 1749	0.411	0.733	0.0104	0.0157	0.193	0.188	0.190	1.734	1.034	.	0.0134	0.257	0.0066	0.0148	0.0031	(0.0036)
1	BS 300B *	0.41	0.71	0.005	0.0007	1.65	0.067	1.86	0.79	0.040	.	0.003	0.40	<0.05	0.005	0.003	0.078
1	IMZ 52/1	0.41	0.25	0.012	(0.009)	1.38	0.094	2.35	0.12	.	.	.	(0.041)	.	.	.	.
1	VS UG116	0.41	0.59	0.012	0.027	0.246	0.221	1.13	0.89	0.026	.	.	0.044	0.0089	.	0.0022	.
1	BS 68E	0.406	0.560	0.005	0.0004	0.296	0.134	0.147	1.49	1.09	.	(0.003)	0.322	0.0030	0.0056	0.009	0.0031
1	IARM 252F	0.406	0.88	0.011	0.009	0.247	0.182	0.412	0.463	0.026	.	(0.006)	0.210	0.0059	0.006	0.0010	(0.003)
1	IARM 30J	0.405	0.884	0.010	0.036	0.256	0.173	0.187	0.972	0.023	.	(0.002)	0.205	(0.010)	0.0109	0.0013	0.0045
1	12X 15260X	0.404	1.67	0.034	0.086	0.390	0.119	0.499	2.48	0.57	.	0.044	0.093	.	0.0021	0.0064	0.417
1	SS 114	0.403	0.416	0.0044	0.0046	0.295	0.358	1.502	0.187	0.078	.	0.0025	0.184	0.0043	0.041	0.0096	0.0086
1	12X 40CDV12A	0.401	0.604	0.0060	0.0013	0.250	0.0978	0.1062	3.29	0.0208	.	0.0040	0.946	0.0155	0.0049	.	0.198
1	IARM Fe4140-19	0.401	(0.9)	0.008	0.022	0.22	0.23	0.14	1.1	0.031	.	(0.005)	0.17	0.0110	0.010	0.0009	0.0030
1	IMZ 55/1A	0.401	0.490	0.009	0.0053	0.406	0.112	0.570	0.998	0.006	.	.	0.247	0.0023	0.017	0.012	0.107
1	IARM 170B	0.400	0.821	(0.005)	(0.004)	0.21	(0.005)	0.197	0.009	0.230	.	.	(0.003)	.	(0.002)	(0.19)	(0.002)
1	IARM 31G	0.40	0.689	0.0136	(0.013)	0.262	0.183	1.814	0.820	0.0214	.	(0.004)	0.223	0.0069	0.0077	0.0015	0.0036
1	IMZ 63/2	0.40	0.63	0.017	0.009	0.16	0.14	0.13	0.16	(0.010)	.	.	.	.	.	.	.
1	SS 225/2	0.40	0.56	0.019	0.012	0.23	.	1.43	1.08	.	.	.	0.34	.	.	.	.
1	12X 826M40A	0.395	0.529	0.0094	0.0025	0.248	0.1294	2.408	0.649	0.0404	.	0.0056	0.510	0.0089	0.0085	.	.
1	ECRM 190-1D	0.395	1.28	0.0112	0.0044	0.278	.	0.934	2.18	.	.	.	0.410	.	.	.	.
1	IPT 504	0.395	1.474	0.019	0.031	0.232	0.096	0.048	0.098	0.032	0.028	.	0.009	0.0078	.	0.0011	.
1	BS 55H	0.394	1.43	0.012	0.0040	0.323	0.156	0.93	1.82	0.025	.	0.0041	0.144	0.0052	0.011	0.0020	0.0047
1	SS 112	0.394	0.436	0.0043	0.0026	0.289	0.149	1.461	1.236	0.0148	.	0.0021	0.190	0.0024	0.0086	0.0100	.
1	BS 4942A	0.393	0.64	(0.007)	0.0013	0.275	0.067	0.058	0.976	0.011	.	0.0031	0.538	0.0072	0.0044	0.0031	0.280
2	BS 68B	0.39	0.52	0.010	0.020	0.26	0.163	0.165	1.51	1.08	.	.	0.309	0.0073	0.010	0.005	0.007
1	BS 8740	0.39	0.86	0.011	0.023	0.25	0.16	0.55	0.49	0.037	.	0.0051	0.27	0.0073	0.008	0.0012	0.0024
1	SS 214/2	0.39	1.61	0.032	0.043	0.18	0.21	0.15	0.09	.	.	.	0.26	.	.	.	.
1	VS RG30/1	0.388	0.425	.	0.022	0.61	0.090	0.74	3.13	0.089	.	.	0.58	.	.	0.037	0.70
1	VS UG79	0.387	0.65	0.0102	0.0077	0.451	0.230	0.24	1.82	(0.8)	.	.	(0.04)	.	.	(0.2)	(0.02)
1	BS 55G	0.386	0.85	0.010	0.0026	0.58	0.106	0.131	1.79	0.0123	.	0.0062	0.421	0.0079	0.0074	0.0044	0.0056
1	IRSID 1731	0.386	0.458	0.017	(0.008)	0.263	0.060	2.88	0.734	(0.012)	.	.	(0.036)	.	.	(0.047)	.
1	DSZU C045	0.382	0.394	0.0080	0.0144	0.262	0.097	0.093	1.41	0.93	.	0.0052	0.219	0.0080	0.0050	0.0112	0.004
1	IARM Fe4340-22	0.382	0.739	0.0079	0.0273	0.244	0.174	1.75	0.787	0.022	.	0.0055	0.242	(0.007)	0.0083	0.0010	0.0047
1	VS UG3/10	0.38	0.644	0.0104	0.0077	0.453	0.230	0.243	1.83	0.84	.	.	0.042	0.012	0.0057	0.161	0.0053
1	DSZU C045a	0.374	0.382	0.012	0.0032	0.267	0.191	0.147	1.45	0.86	.	0.010	0.184	0.0063	0.012	0.004	0.004
1	12X 605M36A	0.373	1.504	(0.009)	0.0317	0.283	0.199	0.146	0.243	0.0105	.	0.0102	0.292	0.0095	0.0101	.	.
1	12X 24065A	0.370	0.502	0.0129	0.0044	0.218	0.216	0.271	1.412	1.035	.	0.0074	0.1716	0.0076	0.0120	0.0028	0.0040
1	BS 1762A *	0.37	2.09	0.047	0.043	0.45	0.16	1.19	0.90	0.064	.	0.030	0.37	<0.05	0.080	0.12	0.22
1	IARM Fe5140H-18	0.37	0.93	0.014	0.022	0.187	0.253	0.266	0.67	0.13	.	(0.011)	0.031	0.007	0.0069	0.0015	(0.0024)
1	ECRM 129-3D	0.3684	0.371	0.0110	0.0165	0.2087	0.0804	1.022	1.702	1.016	.	0.0049	0.206	0.0046	0.0067	0.0030	.

| # | Number | C | Mn | P | S | Si | Cu | Ni | Cr | Al | Als | As | Mo | N | Sn | Ti | V |

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment
BS 4942	.	.	0.0006	.	0.010	.	.	.	(0.0021)	.	.	.	.	.	.	Disc 38 mm Ø x ~7 mm	last
IARM 340A	0.0004	.	(0.0004)	.	0.006	.	(0.0002)	0.015	(0.001)	(0.001)	0.0021	.	(0.005)	(0.001)	(0.002)	Disc 31 mm Ø x 2 mm	
IARM 252E	.	.	.	.	0.0093	.	.	.	.	.	.	.	.	.	.	Disc 31 mm Ø X 2 or 18 mm	
IRSID 1749	(<0.0005)	(<0.0002)	(0.0002)	.	0.0141	.	0.0009	(<0.0005)	0.0002	(<0.0002)	0.0018	.	(<0.0030)	(<0.0006)	(<0.0003)	Disc 41 mm Ø x 25 mm	
BS 300B *	<0.005	*Provisional Analysis		.	0.012	94.0	.	0.003	<0.005	<0.005	<0.05	<0.05	0.001	.	0.001	Disc 38 mm Ø x ~7 or 19+ mm	
IMZ 52/1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
VS UG116	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~25 mm	
BS 68E	0.0002	.	(0.0003)	.	0.007	.	0.0004	(0.002)	0.0007	(<0.001)	(<0.001)	.	(<0.001)	.	.	Disc 38 mm Ø x ~7 or 19+ mm	17025
IARM 252F	.	.	.	.	0.0086	.	.	0.0016	.	.	.	.	(0.003)	.	.	Disc 31 mm Ø X 2 or 18 mm	
IARM 30J	.	.	.	.	0.0098	.	.	0.0016	.	.	.	.	(0.005)	.	.	Disc 31 mm Ø X 2 mm	
12X 15260X	.	.	.	.	0.085	.	.	0.183	.	0.0012	.	.	.	.	0.0054	Disc ~40 mm Ø x ~15 mm	
SS 114	0.0008	.	.	.	0.0171	.	.	0.0042	.	.	.	.	.	.	0.0051	Disc 44 mm Ø x 19 or 50 mm	
12X 40CDV12A	.	.	.	.	0.0197	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm	
IARM Fe4140-19	.	.	.	.	0.009	.	.	(0.002)	.	.	(0.004)	.	(0.003)	.	.	Disc 31 mm Ø x 2 or 18 mm	
IMZ 55/1A	0.0018	.	.	.	0.0039	.	.	0.010	.	.	0.0051	.	.	.	.	Disc 38 mm Ø x 20 mm	
IARM 170B	(0.0004)	.	.	.	(0.005)	.	.	(0.004)	.	.	.	.	.	.	(0.005)	Disc 31 mm Ø x 2 or 18 mm	
IARM 31G	0.0004	.	.	.	0.0083	.	.	(0.0023)	.	.	.	.	(0.004)	.	(0.0012)	Disc 31 mm Ø X 2 or mm	
IMZ 63/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
SS 225/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
12X 826M40A	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm	
ECRM 190-1D	.	.	.	.	0.034	.	.	.	.	.	.	.	.	.	.	Block 35 mm x 35 mm x 30 mm	
IPT 504	.	.	.	.	0.0077	.	.	(0.012)	.	.	.	.	.	.	.	Disc 36 mm Ø x 20 mm	
BS 55H	0.0007	H:0.7ppm	0.0013	.	0.0149	94.7	<0.005	(0.004)	0.0007	(0.0002)	(0.0014)	<0.05	0.0013	<0.005	(0.0011)	Disc 38 mm Ø x ~7-or 19+ mm	17034
SS 112	0.0007	.	.	.	0.0175	.	.	0.0065	.	.	.	.	.	.	.	Disc 44 mm Ø x 19 mm	
BS 4942A	(0.0001)	.	0.0012	.	0.0077	96.8	0.0004	(0.0015)	0.0020	(0.0007)	(0.001)	.	(0.0009)	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm	17025
BS 68B	.	.	.	.	0.010	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x 15-19 mm	
BS 8740	0.0003	.	(0.0003)	.	0.0086	96.91	(0.0002)	(0.0007)	(0.001)	(0.0003)	0.0017	(0.003)	0.0023	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm	17034
SS 214/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 42 mm Ø x 19 mm	
VS RG30/1	.	.	.	.	0.355	.	.	0.103	.	.	.	.	0.89	.	.	Disc ~45 mm Ø x ~28 mm	
VS UG79	.	.	.	.	.	.	.	(0.01)	.	.	.	.	(0.01)	.	.	Disc ~40 mm Ø x ~26 mm	
IRSID 1731	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 44 mm Ø x 30 mm	
DSZU C045	(0.0004)	.	0.0005	.	0.007	.	.	0.004	.	.	.	.	(0.011)	.	.	Disc 40 mm Ø x 25 mm	last
IARM Fe4340-22	.	.	.	.	0.093	.	.	(0.003)	.	.	.	.	0.011	.	.	disc	
VS UG3/10	.	.	.	.	.	.	.	.	.	.	.	.	0.006	.	.	Disc ~45 mm Ø x ~28 mm	
DSZU C045a	(0.0004)	.	(0.002)	.	0.010	.	.	0.003	.	.	.	.	(0.005)	.	.	Disc 40 mm Ø x 25 mm	
12X 605M36A	.	.	0.0033	.	0.0151	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm	
12X 24065A	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0034	.	Disc ~40 mm Ø x ~15 mm	
BS 1762A *	0.003	* Provisional Analysis			0.070	[93.7]	.	0.10	<0.05	.	0.013	0.034	0.032	.	0.033	Disc 36 mm Ø x 25 mm	
IARM Fe5140H-18	.	.	.	.	0.0081	.	.	(0.0015)	.	.	.	.	(0.003)	.	.	Disc 31 mm Ø x 2 or 18 mm	
ECRM 129-3D	.	.	.	.	0.0148	.	.	.	.	.	0.00059	.	.	(0.0030)	.	Disc 39 mm Ø x 25 mm	

| Number | B | Bi | Ca | Ce | Co | Fe | Mg | Nb | O | Pb | Sb | Ta | W | Zn | Zr | Units | Comment |

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= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V
1	12X 12700A	0.364	0.636	0.0205	0.0116	0.238	0.0342	0.0197	0.070	0.055	.	0.0060	0.0345	0.0073	.	.	0.0033
1	IMZ 115	0.36	0.65	0.045	0.024	0.043	0.25	0.35	0.27	(0.015)	(0.0058)	.	0.070	0.0087	.	.	(0.063)
1	IRSID 1750	0.359	1.801	0.0128	0.075	0.246	0.320	0.187	0.227	0.0175	.	0.0188	0.0433	0.0107	0.0137	(0.0016)	0.114
1	IMZ 114A	0.358	1.156	0.0235	0.0220	0.328	0.492	0.098	0.423	0.027	.	0.0035	0.112	0.0029	0.014	0.0088	0.096
1	12X 352E	0.356	0.817	0.067	0.101	0.413	0.125	0.344	0.248	0.263	.	0.029	0.230	.	0.109	0.240	0.0251
2	TL 1100	0.3487	0.6284	0.0124	0.0049	0.2839	0.1767	3.727	1.664	0.0374	.	.	0.3349	0.0116	0.0083	.	.
1	VS UG90	0.34	0.286	0.0079	0.012	0.221	0.200	0.265	0.261	0.037	0.032	0.0044	0.046	0.015	.	0.039	.
2	HRT FE2021-N	0.33	0.31	0.0178	0.0014	0.28	0.070	0.193	2.81	0.014	.	0.004	2.7	0.007	0.004	0.001	0.52
2	HRT FE2022-N	0.319	0.447	0.0058	(0.0011)	0.256	0.029	0.170	2.97	0.0134	.	(0.0025)	0.93	0.0060	0.0029	(0.0015)	0.279
1	12X 41300A	0.319	0.551	0.0082	0.0156	0.183	0.131	0.084	0.996	0.027	.	0.0043	0.217	0.0095	0.0060	.	.
1	BS 4130A	0.318	0.56	0.016	0.0183	0.270	0.249	0.152	0.97	0.025	.	(0.005)	0.206	0.0060	0.0093	0.0009	0.0029
1	BS 4330MOD	0.316	0.92	0.0052	0.0010	0.269	0.105	1.83	0.848	0.031	.	0.0038	0.478	0.0031	0.0062	0.0027	0.083
1	BS 8630	0.315	0.752	0.0032	0.0043	0.261	0.046	0.544	0.477	0.023	.	0.0038	0.194	0.0038	0.0029	0.0008	0.0006
1	SS 219/4	0.314	0.81	0.011	0.027	0.079	0.088	2.55	0.66	.	.	.	0.58	.	0.011	.	.
1	VS UG145	0.312	0.220	0.0066	0.059	0.164	0.307	0.453	1.10	0.009	.	0.034	1.34	0.012	0.0072	0.020	0.68
1	12X 357D	0.312	0.219	0.0101	0.066	0.211	0.203	0.188	0.21	0.138	.	0.0127	0.025	.	0.0145	0.074	0.127
2	HRT FE2010-N	0.31	0.56	0.015	0.034	0.28	0.05	0.25	2.45	0.049	.	.	0.17	.	.	.	0.117
1	SS 222/1	0.3095	0.618	0.0175	0.0089	0.227	0.150	3.536	0.0535	.	.	.	0.0287	0.0100	.	.	.
1	IARM 143F	0.308	0.573	(0.011)	0.0177	0.23	0.221	0.088	0.865	0.026	.	0.0051	0.163	0.0098	0.010	(0.0012)	0.0046
1	IARM 330B	0.302	0.82	0.0075	(0.003)	0.227	0.084	1.856	0.807	0.023	.	.	0.406	.	0.0047	.	0.076
1	VS UG35/2	0.301	0.109	.	.	0.94	0.174	0.84	2.63	.	.	.	0.65	.	.	.	0.108
1	VS RG27	0.30	0.91	0.054	0.0032	0.42	0.188	0.135	1.53	0.88	.	.	0.222	.	.	.	0.064
1	VS UG3/11	0.30	0.91	0.056	0.0032	0.406	0.187	0.132	1.54	0.89	.	.	0.220	0.022	.	0.153	0.064
1	VS UG7/5	(0.3)	0.68	(0.005)	(0.01)	(0.2)	(0.03)	2.27	0.99	(0.07)	.	.	0.25	.	.	(0.002)	0.23
1	12X 16604A	0.299	0.444	0.0064	0.0018	0.239	0.131	1.892	1.912	0.0111	.	.	0.334	0.0046	0.0060	.	0.0069
1	IARM 330A	0.299	1.00	(0.005)	(0.001)	0.273	0.074	1.80	0.90	0.045	.	(0.003)	0.404	0.0024	0.0039	0.006	0.071
1	SRM 1269	0.298	1.35	0.012	0.0061	0.189	0.095	0.108	0.201	0.016	.	.	0.036	.	.	.	0.004
1	ECRM 086-1D	0.297	0.879	0.024	0.037	0.206	0.320	0.168	0.150	.	.	0.023	.	.	0.026	.	.
2	CZ CM-3A	0.295	0.37	0.016	0.0013	0.27	0.16	1.82	1.87	0.05	.	0.005	0.33	0.007	0.007	0.006	0.007
1	IRSID 1745	0.295	0.850	0.0077	0.081	0.220	0.202	0.188	1.130	0.0202	.	0.0262	0.222	.	0.0134	(0.003)	(0.004)
1	VS UG9/10	0.294	0.616	.	(0.003)	0.235	0.169	0.144	0.170	0.280	.	.	0.282	0.015	0.0017	0.163	1.25
1	VS RG27/1	0.290	0.74	0.044	0.0043	0.28	0.208	0.142	1.83	1.07	.	.	0.191	.	.	0.110	0.072
1	DSZU C05b	0.282	1.82	0.017	0.033	0.347	0.478	1.80	1.355	0.005	.	0.014	0.218	0.013	0.020	0.033	0.221
1	IPT 501	0.277	0.723	0.016	0.030	0.208	0.083	0.063	1.05	0.034	.	.	0.210	0.0076	0.008	0.0015	.
1	IARM 378A	0.274	1.38	0.018	0.037	0.307	0.299	0.142	0.187	(0.0029)	.	.	0.031	(0.02)	0.0236	(0.003)	0.0844
1	SRM 1225	0.274	0.48	0.007	0.014	0.221	.	0.018	0.91	.	.	.	0.166	.	.	.	0.004

| # | Number | C | Mn | P | S | Si | Cu | Ni | Cr | Al | Als | As | Mo | N | Sn | Ti | V |

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment
12X 12700A	0.0014	.	.	.	0.0047	.	.	.	.	.	.	.	.	0.0120	.	Disc ~50 mm Ø x ~20 mm	
IMZ 115	.	.	.	.	.	.	.	0.09	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
IRSID 1750	(0.0002)	(0.00002)	(0.0002)	(<0.0005)	(0.0120)	.	(<0.0002)	(<0.0010)	.	(<0.001)	0.0031	(<0.0010)	(0.004)	(0.0012)	(0.0002)	Disc 38 mm Ø x 25 mm	
IMZ 114A	0.0019	.	.	.	0.0057	.	.	0.015	.	0.021	0.018	.	(0.007)	(0.006)	.	Disc 38 mm Ø x 20 mm	
12X 352E	.	.	.	.	0.025	.	.	0.063	.	.	.	(0.018)	0.275	.	.	Disc ~40 mm Ø x ~15 mm	
TL 1100	.	.	.	.	0.0283	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm	
VS UG90	.	.	.	.	.	.	.	.	.	.	0.0011	.	.	.	.	Disc ~47 mm Ø x ~30 mm	
HRT FE2021-N	0.0006	.	.	0.0011	0.011	.	0.0004	0.007	.	.	0.001	0.002	0.027	0.002	0.0012	Disc 36 mm Ø x 20 mm	
HRT FE2022-N	(0.0004)	.	.	(0.0030)	0.0084	.	(0.0008)	(0.0034)	.	.	(0.0012)	(0.0028)	(0.0050)	(0.0028)	(0.0010)	Disc 31 mm Ø X 20 mm	
12X 41300A	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0012	.	Disc ~38 mm Ø x ~15 mm	
BS 4130A	0.0002	.	0.0010	.	0.0068	97.2	<0.005	0.0014	0.0017	(0.0002)	0.0018	(0.006)	0.0025	.	(0.0012)	Disc 38 mm Ø x ~7 or 19+ mm	17034
BS 4330MOD	(0.0009)	.	(0.001)	.	0.034	95.1	(0.0002)	0.007	(0.001)	(0.001)	(0.0007)	.	(0.001)	.	0.0016	Disc 44 mm Ø x ~7 or 19+ mm	17034
BS 8630	(0.0002)	.	(0.0007)	.	0.0029	97.3	(0.0007)	(0.0006)	0.0008	(0.0007)	0.0012	.	(0.001)	.	(0.001)	Disc 44 mm Ø x 19+ mm	17034
SS 219/4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
VS UG145	0.0019	0.0052	0.0006	(0.02)	0.161	.	.	0.102	.	0.021	.	(0.01)	0.162	0.0017	0.008	Disc ~37 mm Ø x ~20 mm	
12X 357D	0.0036	0.0024	.	.	0.198	.	.	0.011	.	0.040	0.018	.	0.0213	.	0.0049	Disc ~40 mm Ø x ~15 mm	Se:0.0057
HRT FE2010-N	.	.	.	.	0.012	.	.	.	.	.	.	.	(0.014)	.	.	Disc 40 mm Ø x 20 mm	
SS 222/1	.	.	.	.	0.0379	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
IARM 143F	.	.	.	.	0.010	.	.	(0.0015)	(0.003)	.	.	.	(0.003)	.	.	Disc 31 mm Ø X 2 or 18 mm	
IARM 330B	.	.	.	.	0.013	.	.	(0.002)	.	.	.	.	0.024	.	.	Disc 31 mm Ø X 2 or 18 mm	
VS UG35/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~28 mm	
VS RG27	.	.	.	.	0.071	.	.	.	.	.	.	.	0.170	.	.	Disc ~45 mm Ø x ~28 mm	
VS UG3/11	.	.	.	.	0.072	.	.	.	.	.	.	.	0.176	.	.	Disc ~45 mm Ø x ~28 mm	
VS UG7/5	.	.	.	.	.	.	.	(0.1)	.	.	.	.	0.35	.	.	Disc ~45 mm Ø x ~28 mm	
12X 16604A	.	.	.	.	0.0366	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø X ~15 mm	
IARM 330A	0.0003	.	0.0010	.	0.0063	.	.	(0.003)	(0.0009)	(0.0004)	(0.001)	.	(0.004)	.	0.0015	Disc 31 mm Ø x 2 mm	
SRM 1269	.	.	.	.	.	.	.	.	.	0.005	.	.	.	.	.	Disc 32 mm Ø x 19 mm	
ECRM 086-1D	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm	
CZ CM-3A	0.0002	.	.	.	0.012	.	.	0.006	.	.	.	.	0.015	.	.	Disc ~39 mm Ø x 25 mm	
IRSID 1745	.	.	.	.	.	.	.	.	.	.	.	.	.	(0.003)	.	Disc 48 mm Ø x 30 mm	
VS UG9/10	.	.	.	.	.	.	.	.	.	.	.	.	1.34	.	.	Disc ~45 mm Ø x ~28 mm	
VS RG27/1	.	.	.	.	0.025	.	.	.	.	.	.	.	0.170	.	.	Disc ~45 mm Ø x ~28 mm	
DSZU C05b	0.018	.	.	.	0.179	.	.	0.170	.	.	.	.	0.53	.	.	Disc 40 mm Ø x 25 mm	
IPT 501	.	.	.	.	0.008	.	.	.	.	.	.	.	.	.	.	Disc 34 mm Ø x 18 mm	
IARM 378A	(0.0006)	.	.	.	0.013	.	.	(0.003)	.	.	.	.	(0.006)	.	.	Disc 31 mm Ø x 2 or 18 mm	
SRM 1225	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm	

| Number | B | Bi | Ca | Ce | Co | Fe | Mg | Nb | O | Pb | Sb | Ta | W | Zn | Zr | Units | Comment |

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= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V
1	BS 1763	0.271	1.50	0.016	0.024	0.68	0.175	0.54	0.560	0.051	.	0.066	0.55	0.0100	(0.013)	0.30	0.291
1	BS HiCal-1	0.271	1.00	(0.007)	0.0007	1.29	0.152	3.28	1.55	0.070	.	0.0022	0.379	.	(0.0002)	0.0037	0.0027
1	IARM 380A	0.268	1.24	0.021	0.025	0.181	0.265	0.114	0.192	0.0029	.	(0.007)	0.059	(0.012)	0.0117	.	0.0475
2	RM Fe 2/4	0.26	0.61	0.039	0.016	0.30	0.30	0.68	0.70	(0.001)	.	0.04	0.47	0.020	0.04	(0.0065)	0.46
1	12X 12750U	0.258	0.510	0.0078	0.0053	0.599	0.106	0.786	0.792	0.253	.	.	0.088	.	0.110	0.159	0.102
1	BS 9325B	0.254	0.504	0.032	0.0067	0.38	0.166	3.13	1.22	0.027	.	0.0033	0.203	0.0112	(0.002)	0.0020	0.0080
2	BS 9325	0.25	0.91	0.008	0.007	0.32	0.13	3.29	1.48	0.030	.	0.004	0.31	0.0089	0.009	.	0.004
1	IARM 380B	0.243	1.27	0.016	0.027	0.238	0.307	0.182	0.153	(0.0021)	.	0.0058	0.055	(0.013)	0.0132	0.0011	0.049
2	HRT FE2018-N	0.24	0.74	0.012	(0.003)	0.29	0.06	0.43	1.46	0.017	.	.	0.75	0.0066	.	.	0.30
1	IMZ 113	0.24	0.50	0.022	0.025	0.10	0.11	0.13	1.25	0.007	0.004	.	0.050	0.0154	.	.	0.039
1	12X 722M24A	0.236	0.510	0.0135	0.0199	0.262	0.200	0.208	3.094	0.0187	.	0.0075	0.497	.	0.0116	.	0.0080
1	IARM FeF1-21	0.235	0.811	0.012	0.0060	0.278	0.0125	0.058	0.188	0.028	.	0.0021	0.48	0.0070	0.0016	0.0021	0.0191
1	IARM 169B	0.232	0.75	(0.004)	(0.004)	(0.32)	(0.005)	(0.010)	0.010	0.36	.	.	(0.004)	.	(0.002)	0.23	(0.002)
1	VS UG6/5	0.232	0.39	(0.006)	(0.008)	0.51	0.257	(0.2)	1.85	(0.4)	.	.	(0.2)	.	.	(0.01)	0.34
2	DSZU C043A	0.222	2.14	0.060	0.064	0.131	0.51	2.93	0.49	0.066	.	(0.001)	0.146	(0.009)	0.0023	0.041	0.25
1	IARM 229B	0.220	0.858	0.0073	0.0106	0.329	0.0153	0.030	0.017	0.025	.	(0.002)	0.495	0.0072	0.0012	0.0019	0.0059
1	ECRM 197-1D	0.219	0.792	0.0073	0.0232	0.275	0.152	0.148	0.451	0.0313	.	0.0083	0.402	0.0114	0.0097	0.0005	.
2	BS 3961	0.215	0.565	0.016	0.022	0.236	0.133	1.67	0.510	0.022	.	.	0.27	0.0079	(0.008)	(<0.003)	(0.002)
1	BS 8620G	0.215	0.799	0.0094	0.020	0.264	0.191	0.58	0.568	0.027	.	0.0049	0.205	0.0080	0.0095	0.0011	0.0018
1	BS 8822A	0.212	0.852	0.020	0.031	0.287	0.030	0.569	0.562	(0.010)	.	0.0027	0.378	0.0086	(0.003)	0.0015	0.0028
1	DSZU C048	0.212	0.467	0.0102	0.0059	0.273	0.262	0.105	0.175	0.0293	.	0.0085	0.016	(0.011)	0.016	.	.
1	12X 86200-21	0.211	0.811	0.0128	0.0224	0.237	0.199	0.551	0.507	0.0241	.	0.0045	0.190	0.0082	0.0094	.	0.0039
1	IARM Fe8620-18	0.211	0.857	0.012	0.026	0.23	0.197	0.446	0.536	0.0246	.	0.009	0.197	0.007	0.0090	0.0015	0.0061
2	TL 1001	0.2108	0.8645	0.0141	0.0236	0.2141	0.1902	0.5378	0.5290	0.0191	.	(0.0051)	0.1987	0.0102	0.0090	(0.0134)	.
1	IPT 502	0.210	0.823	0.018	0.026	0.198	0.121	0.408	0.485	0.024	.	.	0.155	0.0069	.	0.0016	.
1	BS LF2C	0.21	1.02	0.012	0.0182	0.263	0.153	0.099	0.152	0.029	.	0.0042	0.029	0.0096	0.011	0.0019	0.0014
1	VS UG4/11	0.21	0.59	0.024	0.0069	0.285	0.074	0.173	1.21	0.032	.	.	0.87	0.020	.	0.034	0.78
1	IARM 33D	0.209	0.593	0.009	0.023	0.207	0.072	1.78	0.139	0.026	.	0.0035	0.229	0.0053	0.005	0.003	0.002
1	BS 3952	0.208	0.543	0.011	0.021	0.263	0.201	0.111	0.104	0.048	.	<0.005	0.525	0.0006	(0.0009)	(0.002)	0.0014
1	BS 4820A	0.203	0.64	0.008	0.014	0.185	0.212	3.28	0.116	0.029	.	0.006	0.203	0.0076	0.0097	0.0012	0.0010
1	12X 12747V	0.201	1.240	0.0648	0.0275	0.298	0.232	0.494	0.58	0.0271	.	0.0075	0.606	0.025	0.144	0.099	0.0272
1	VS RG31/1	0.200	0.191	0.0039	0.0058	0.28	0.39	2.12	1.28	0.30	.	.	0.30	.	.	0.21	0.200
1	KUT B3	0.20	0.14	(0.012)	0.025	0.53	0.25	.	5.94	.	.	.	.	.	.	.	1.16
1	VS UG5/5	(0.2)	0.52	(0.005)	(0.03)	0.145	0.37	0.42	1.42	0.19	.	.	0.44	.	.	(0.003)	0.29
1	BS 4820B	0.199	0.67	0.0081	0.0113	0.269	0.221	3.32	0.116	0.038	.	0.0055	0.251	0.0075	0.0098	0.0013	0.0016
1	IARM 155F	0.199	0.617	0.008	(0.013)	0.223	0.219	3.36	0.144	0.0356	.	(0.006)	0.244	(0.005)	0.0084	0.0020	0.0015
1	SRM 1286	0.196	0.152	0.008	0.017	0.130	0.043	2.81	1.53	0.109	.	0.019	0.344	.	0.012	0.040	0.0057
2	BS 1931	0.194	0.84	0.007	0.018	0.235	0.116	0.42	0.50	0.021	.	0.007	0.168	0.0079	0.007	.	0.002
1	IARM Fe4820-18	0.192	0.541	(0.011)	0.0018	0.26	0.167	3.51	0.144	0.022	.	(0.006)	0.287	0.007	0.0089	(0.0011)	0.0015
1	VS UG8/10	0.192	1.81	0.0064	(0.005)	0.61	0.198	0.348	0.729	0.082	.	.	0.030	0.0185	0.0052	0.0034	.

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment
BS 1763	0.0031	.	<0.05	.	0.124	94.6	0.0002	0.141	0.008	0.0026	(0.019)	(0.019)	<0.05	H:3ppm	(0.026)	Disc 37 mm Ø x 19 or 20 mm	17034
BS HiCal-1	(0.0001)	.	0.0140	.	0.0024	[91.9]	(0.0003)	(0.002)	.	(0.0005)	.	.	(0.0009)	.	(0.0008)	Disc ~38 mm Ø x ~30 mm	17025
IARM 380A	.	.	.	.	(0.010)	.	.	(0.0020)	.	.	.	.	(0.009)	.	.	Disc 31 mm Ø X 2 mm	
RM Fe 2/4	(0.0027)	.	<0.001	.	0.29	.	.	(0.011)	.	<0.02	<0.03	.	0.19	.	<0.02	Disc 40 mm Ø x 40 mm	
12X 12750U	.	.	.	.	0.581	.	.	0.111	.	.	.	.	0.100	.	.	Disc ~40 mm Ø x ~15 mm	
BS 9325B	(0.0003)	.	(0.004)	.	0.0073	94.0	<0.005	(0.002)	0.011	0.0019	<0.05	(0.003)	0.0036	.	0.0010	Disc 38 mm Ø x 30 mm	17034
BS 9325	.	.	0.0049	.	0.010	.	.	.	0.0010	.	.	.	.	.	.	Disc 38 mm Ø x ~7 mm	last
IARM 380B	.	.	.	.	0.014	.	.	(0.0016)	.	.	.	.	(0.003)	.	.	Disc 31 mm Ø X 2 or 18 mm	
HRT FE2018-N	(0.0003)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 36 mm Ø x 20 mm	
IMZ 113	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
12X 722M24A	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0028	.	Disc ~38 mm Ø x ~15 mm	
IARM FeF1-21	0.0010	.	.	.	0.0095	.	.	0.0087	0.0024	0.0009	.	.	0.0022	.	0.0014	Disc 38 mm Ø x ~2 or 19 mm	
IARM 169B	0.0003	.	.	.	(0.003)	.	.	(0.004)	.	.	.	.	(0.003)	.	.	Disc 31 mm Ø x 2 or 18 mm	
VS UG6/5	.	.	.	.	.	.	.	(0.01)	.	.	.	.	0.16	.	.	Disc ~45 mm Ø x ~28 mm	
DSZU C043A	(0.001)	.	0.0004	.	.	.	.	0.006	.	.	.	.	0.092	.	.	Disc 40 mm Ø x 25 mm	
IARM 229B	(0.0006)	.	(0.0003)	.	0.0116	.	.	(0.0019)	(0.0017)	(0.0005)	(0.0006)	(0.003)	(0.003)	.	(0.0008)	Disc 31 mm Ø x 2 mm	
ECRM 197-1D	.	.	.	.	0.0135	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 mm	
BS 3961	.	.	.	.	(0.010)	.	.	.	.	.	.	.	.	.	.	Disc 44 mm Ø X ~7 or 19+ mm	
BS 8620G	0.0002	.	0.0015	.	0.0077	97.1	(0.0004)	0.0020	0.0032	<0.005	0.0020	<0.0005	(0.0022)	<0.005	(0.0007)	Disc 38 mm Ø x ~7-or 19+ mm	17034
BS 8822A	0.0004	.	(0.0002)	.	0.0042	96.9	.	0.0024	0.0068	0.0005	(0.0016)	0.007	<0.005	<0.01	(0.002)	Disc 37 mm Ø x 25 mm	17034
DSZU C048	.	.	(0.0017)	.	0.015	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm	
12X 86200-21	.	.	.	.	0.0072	.	.	0.0014	.	.	0.0024	.	(0.003)	.	(0.0014)	Disc 38 mm Ø x 19 mm	
IARM Fe8620-18	.	.	.	.	0.0085	.	.	(0.0014)	.	.	.	.	(0.004)	.	.	Disc 31 mm Ø x 2 or 18 mm	
TL 1001	.	.	.	.	(0.0070)	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm	
IPT 502	.	.	.	.	0.0083	.	.	.	.	.	.	.	.	.	.	Disc 36 mm Ø x 20 mm	
BS LF2C	0.0002	.	0.0002	.	0.0100	98.0	(0.0003)	0.0009	0.0018	0.0004	<0.05	<0.05	0.0023	<0.005	0.0008	Disc 44 mm Ø x ~7 or 19 mm	17025, 17034
VS UG4/11	.	.	.	.	0.0108	.	.	0.071	.	.	.	.	0.0092	.	.	Disc ~45 mm Ø x ~28 mm	
IARM 33D	0.0002	.	(0.0003)	.	0.008	.	.	0.002	0.0013	<0.001	(0.002)	.	<0.005	.	<0.002	Disc 31 mm Ø x 2 or 18 mm	
BS 3952	0.0003	.	<0.005	.	(0.003)	98.0	(0.00008)	<0.005	.	(0.0009)	0.0034	(0.003)	<0.005	.	<0.005	Disc 39 mm Ø x ~7 or 19+ mm	17034
BS 4820A	0.0002	.	0.0003	.	0.008	.	0.0003	(0.002)	0.0011	(0.0002)	0.0024	.	(0.002)	.	.	Disc 38 mm Ø x ~7 or 19+ mm	17025
12X 12747V	.	.	.	.	0.211	.	.	.	.	.	.	.	0.0276	.	.	Disc ~40 mm Ø X ~15 mm	
VS RG31/1	.	.	.	.	0.273	.	.	.	.	.	.	.	0.39	.	.	Disc ~45 mm Ø x ~28 mm	
KUT B3	.	.	.	.	.	.	.	.	.	.	.	.	1.19	.	.	Disc 30-35 mm Ø x 39 mm	
VS UG5/5	.	.	.	.	.	.	.	(0.01)	.	.	.	.	0.38	.	.	Disc ~45 mm Ø x ~28 mm	
BS 4820B	(0.0003)	.	0.0004	.	0.012	94.8	0.0004	0.0022	(0.0015)	(0.0003)	0.0028	(0.0020)	(0.003)	.	0.0017	Disc 38 mm Ø x ~7 or 19+ mm	17034
IARM 155F	.	.	.	.	0.012	.	.	0.0016	(0.003)	.	.	.	(0.004)	.	.	Disc 31 mm Ø X 2 or 18 mm	
SRM 1286	(0.006)	.	.	.	0.116	.	.	(0.012)	.	(0.0002)	.	.	(0.013)	.	(0.021)	Disc 32 mm Ø x 19 mm	
BS 1931	.	.	(0.0008)	.	0.012	.	.	.	(0.0052)	.	.	.	.	.	.	Disc 41 mm Ø x ~7 mm	last
IARM Fe4820-18	.	.	.	.	0.0107	.	.	(0.002)	(0.003)	.	.	.	(0.004)	.	.	Disc 31 mm Ø x 2 or 18 mm	
VS UG8/10	.	.	.	.	.	.	.	(0.003)	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment

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= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V
1	VS UG114	0.190	1.65	0.010	0.0074	0.59	0.173	0.345	1.03	0.146	.	.	0.016	.	.	0.006	0.0031
1	BS 4320	0.191	0.599	0.0068	0.0026	0.259	0.050	1.73	0.518	0.024	.	0.0036	0.228	0.0049	0.0040	0.0009	0.0016
1	IMZ 162	0.19	1.31	0.021	0.014	0.59	0.077	1.64	0.91	(0.040)	.	.	0.52	.	.	0.12	0.045
2	BS 4620	0.189	0.57	0.006	0.018	0.25	0.216	1.75	0.072	0.032	.	(0.0084)	0.24	0.0078	0.013	(0.0026)	(0.0008)
1	VS UG113	0.189	1.55	0.0087	0.0070	0.59	0.185	0.186	1.12	0.263	.	.	0.010	.	.	0.006	0.0040
2	BS 4820	0.188	0.57	0.010	0.025	0.25	0.11	3.29	0.12	0.020	.	0.005	0.21	0.0079	(0.008)	.	(0.002)
1	BS 51F	0.188	0.519	0.016	0.017	0.24	0.231	1.68	0.156	0.022	.	(0.005)	0.224	0.0061	0.008	0.0012	0.0030
1	ECRM 192-1D	0.1875	1.377	0.0029	0.0010	0.219	0.0453	0.755	0.0717	0.0306	0.0285	.	0.482	0.0118	.	.	.
2	PV 102/1	0.186	1.226	0.024	0.018	0.184	0.109	0.140	0.995	.	.	.	0.030	.	.	.	.
1	VS UG112	0.186	1.63	0.0065	0.0050	0.60	0.157	0.185	0.98	0.026	.	.	0.021	.	.	0.0028	0.014
2	CZ CM-8B	0.185	1.95	0.015	0.014	0.112	0.081	0.032	1.22	0.0028	.	0.0035	0.011	0.0075	0.0126	0.0008	0.0078
2	BS 8620A	0.184	0.80	0.008	0.079	0.21	0.15	0.44	0.48	0.016	.	0.007	0.16	0.0107	0.009	(0.002)	0.004
2	BS LF3	0.183	0.52	0.006	0.018	0.206	0.080	3.36	0.098	0.017	.	0.006	0.056	0.0054	0.006	.	(0.002)
1	IMZ 74B	0.181	1.15	0.019	0.014	0.316	0.245	0.123	0.236	0.018	.	0.013	0.053	0.0048	0.020	0.021	0.071
1	IRSID 1658	0.180	0.618	0.014	0.032	0.160	0.345	0.241	0.147	0.029	.	0.034	0.046	.	0.022	(0.002)	(0.002)
2	HRT FE2012-N	0.18	0.70	0.010	0.008	0.31	0.14	0.13	0.25	0.030	.	.	0.26	.	.	.	.
1	12X 12749X	0.176	1.41	0.023	0.066	0.48	0.253	0.47	0.453	0.202	.	0.081	0.195	.	0.018	0.0178	0.068
1	12X 15CDV6A	0.171	0.839	0.0056	0.0086	0.152	0.0231	0.044	1.397	0.019	.	0.0041	0.875	0.0069	0.0011	.	0.242
2	CZ CM-9B	0.17	2.27	(0.008)	(0.010)	0.89	0.040	0.023	1.36	0.049	.	(0.002)	(0.002)	.	(0.003)	(0.002)	(0.006)
2	HRT FE2019-N	0.17	1.27	0.015	(0.001)	0.30	0.03	0.33	0.75	0.068	.	.	0.40	0.0040	.	0.004	(0.003)
1	VS RG31	0.169	0.291	0.0048	0.006	0.39	0.46	2.08	1.31	0.26	.	.	0.306	.	.	0.21	0.207
2	CZ CM-22B	0.168	1.733	0.084	0.067	0.322	0.402	2.883	0.159	0.048	.	0.061	0.146	0.0100	0.067	0.0094	0.608
1	BS 3962	0.168	0.58	0.008	0.018	0.244	0.148	1.83	0.137	0.024	.	0.0053	0.22	0.007	0.007	(0.002)	(0.0016)
1	VS UG7/11	0.164	0.293	0.0045	0.0062	0.39	0.468	2.09	1.31	0.276	.	.	0.298	0.014	.	0.20	0.208
1	VS UG141	0.163	0.90	0.029	0.028	0.390	0.190	0.686	0.78	0.011	.	0.008	0.472	0.0092	0.089	0.104	0.294
1	12X 350C	0.159	0.758	0.0296	0.040	0.467	0.196	0.160	0.335	0.290	.	0.057	0.147	.	0.0382	0.076	0.0115
2	BS XCCT	0.158	0.52	0.005	0.011	0.28	0.027	1.27	0.65	0.006	.	0.004	0.020	0.0076	(0.002)	(0.002)	0.031
2	BS 51E	0.15	0.59	0.010	0.021	0.28	0.22	1.75	0.14	0.028	.	.	0.21	0.0086	0.010	.	(0.0011)
1	BS 45B	0.140	0.502	0.0068	0.017	0.583	0.101	0.136	1.14	0.030	.	0.0066	0.60	0.0066	0.0069	0.0024	0.0083
1	ECRM 193-1D	0.14	0.97	0.007	0.009	0.40	0.60	1.18	0.18	0.025	.	0.0062	0.35	0.0108	.	(0.0013)	(0.002)
1	BS LF3A *	0.14	0.55	0.020	0.022	0.23	0.051	3.55	0.13	0.050	.	0.011	0.053	0.011	0.031	0.026	0.029
1	IARM 36C	0.14	0.49	0.009	0.014	0.25	0.142	0.085	2.43	(0.017)	.	(0.005)	0.98	0.008	(0.008)	.	0.0061
1	12X 15252R	0.137	0.321	0.044	0.044	0.097	0.153	2.03	0.96	0.035	.	.	0.247	0.020	0.047	(0.0007)	0.288
1	DSZU C042a	0.132	0.488	0.0091	0.0062	0.286	0.137	0.195	0.995	0.018	.	0.0069	0.31	(0.01)	0.0079	0.0029	0.189
2	BS 47A	0.130	0.44	0.017	0.015	0.27	0.11	0.12	4.22	0.015	.	.	0.47	0.018	0.008	0.003	0.016
1	IMZ 76	0.129	1.37	0.022	0.011	0.24	0.057	0.33	0.12	0.011	.	.	0.101	.	.	(0.003)	(0.006)
1	VS UG86	0.129	0.217	(0.005)	(0.007)	(0.3)	0.62	1.94	1.52	.	.	.	0.311	.	.	.	0.327
1	BS 1982	0.128	0.441	0.012	0.026	0.255	0.177	0.197	2.09	0.021	.	0.007	0.89	0.0097	0.013	(0.001)	0.003
2	BS 58D	0.127	0.45	0.010	0.005	0.32	0.156	3.02	1.35	0.042	.	.	0.14	0.0147	0.012	.	0.005

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment
VS UG114	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.065	Disc ~45 mm Ø x ~25 mm	
BS 4320	0.0002	.	0.0005	.	0.0060	96.4	0.0002	<0.05	0.0013	<0.005	(0.0015)	<0.05	<0.05	.	<0.05	Disc 38 mm Ø x ~7 or 19+ mm	17034
IMZ 162	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
BS 4620	(0.00006)	.	(0.0001)	.	0.012	.	(0.0001)	(0.0001)	0.0009	(0.0002)	(0.0024)	.	(0.0009)	(0.0002)	.	Disc 38 mm Ø x ~7 or 19+ mm	
VS UG113	.	.	.	.	.	.	.	.	.	.	.	.	0.007	.	0.169	Disc ~45 mm Ø x ~25 mm	
BS 4820	.	.	0.0046	.	0.008	.	.	.	0.0027	.	.	.	.	.	.	Disc 38 mm Ø x ~7 mm	
BS 51F	(0.0002)	.	(0.0005)	.	0.0086	[96.7]	(0.0001)	(0.0007)	(0.002)	(0.0008)	(0.003)	(0.005)	(0.0024)	.	(0.0009)	Disc 38 mm Ø x ~7 or 19+ mm	17034
ECRM 192-1D	.	.	.	.	0.0055	.	.	.	.	.	.	.	.	.	.	Disc ~35 mm Ø x ~30 mm	
PV 102/1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm	
VS UG112	.	.	.	.	.	.	.	.	.	.	.	.	0.005	.	0.0047	Disc ~45 mm Ø x ~25 mm	
CZ CM-8B	0.0023	.	.	.	0.007	.	.	(0.002)	.	(0.003)	(0.004)	.	(0.009)	.	(0.002)	Disc ~39 mm Ø x 25 mm	
BS 8620A	.	0.073	0.0003	.	0.010	.	.	.	(0.004)	(0.001)	.	.	.	.	.	Disc 38 mm Ø x ~7 mm	last
BS LF3	0.0001	.	(0.0001)	.	0.056	.	.	.	0.004	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	
IMZ 74B	0.0009	.	.	.	0.026	.	.	0.041	.	.	0.013	.	0.023	.	.	Disc 38 mm Ø x 19 mm	
IRSID 1658	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 30 mm	
HRT FE2012-N	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm	
12X 12749X	.	.	.	.	0.426	.	.	.	.	0.016	.	.	0.036	.	.	Disc ~40 mm Ø x ~15 mm	
12X 15CDV6A	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
CZ CM-9B	(0.004)	.	.	.	(0.004)	.	.	(0.06)	.	(0.002)	(0.003)	.	.	.	(0.003)	Disc ~39 mm Ø x 25 mm	
HRT FE2019-N	0.0016	.	0.0014	.	(0.003)	.	.	0.029	.	.	.	.	.	.	.	Block 40 mm x 40 mm x 20 mm	
VS RG31	.	.	.	.	0.28	.	.	.	.	.	.	.	0.39	.	.	Disc ~45 mm Ø x ~28 mm	
CZ CM-22B	0.0034	(0.025)	0.0042	.	0.124	.	.	0.051	.	0.0223	0.0132	0.060	0.573	0.0139	.	Disc ~37 mm Ø x ~25 mm	
BS 3962	<0.005	.	(0.00010)	.	0.0072	[96.6]	(0.00015)	(0.0014)	(0.002)	<0.005	(0.003)	<0.05	(0.004)	.	(0.0011)	Disc 37 mm Ø x ~7 or 19+ mm	17034
VS UG7/11	.	.	.	.	0.291	.	.	.	.	.	.	.	0.385	.	.	Disc ~45 mm Ø x ~28 mm	
VS UG141	0.0099	.	.	(0.02)	0.041	.	.	0.099	.	0.0068	0.011	0.031	0.29	0.0017	.	Disc ~37 mm Ø x ~20 mm	
12X 350C	.	.	.	.	0.030	.	.	.	.	.	.	.	0.260	.	.	Disc ~40 mm Ø x ~15 mm	
BS XCCT	.	.	.	.	0.017	.	.	(0.001)	(0.005)	(<0.001)	(0.0004)	.	.	.	(<0.002)	Disc 36 mm Ø x ~7 or 19+ mm	
BS 51E	.	.	.	.	0.035	.	.	.	(0.004)	.	.	.	.	.	.	Disc 35 mm Ø x ~7 mm	
BS 45B	(0.0003)	.	0.0008	.	0.0090	96.7	(0.0004)	(0.002)	0.0015	(0.15)	(0.003)	.	(0.0038)	.	(0.0009)	Disc 38 mm Ø x ~7 or 19 mm	last 17034
ECRM 193-1D	.	.	.	.	0.007	.	.	0.0232	.	.	.	.	.	.	.	Disc 40 mm Ø x 35 mm	
BS LF3A *	0.0005	.	0.003	.	0.061	[95.0]	0.0001	0.030	<0.05	0.002	0.009	0.004	0.030	.	0.022	Disc 37 mm Ø x ~7 or 19+ mm * Provisional	
IARM 36C	.	.	.	.	(0.008)	.	.	.	.	.	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
12X 15252R	.	.	.	.	0.153	.	.	0.067	.	.	.	.	(0.0013)	.	.	Disc ~40 mm Ø x ~15 mm	
DSZU C042a	(0.0005)	.	(0.001)	.	0.009	.	.	0.0025	.	.	.	.	(0.006)	.	.	Disc 40 mm Ø x 25 mm	
BS 47A	.	.	.	.	0.011	.	.	0.002	(0.003)	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	
IMZ 76	(0.001)	.	.	.	.	.	.	0.068	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
VS UG86	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~28 mm	
BS 1982	.	.	.	.	0.010	.	.	(<0.003)	0.0017	(0.0003)	0.002	.	.	.	.	Disc 39 mm Ø x ~7 mm	last, ISO 25
BS 58D	.	.	.	.	0.009	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 mm	last

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment

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= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V
1	BS 46B	0.126	0.472	0.0087	0.0187	0.219	0.128	0.081	2.28	0.020	.	0.0041	1.00	0.0100	0.0073	(0.001)	0.0073
1	12X 15256Q	0.123	0.492	0.0125	0.0163	0.190	0.0550	5.33	0.362	0.1300	.	.	0.0740	0.0056	0.107	.	0.619
1	12X 93106A	0.122	0.605	0.0071	0.0103	0.206	0.199	3.255	1.107	0.0246	.	0.0050	0.0879	0.0098	0.0094	.	0.0029
2	BS 47B	0.122	0.39	0.014	0.022	0.22	0.12	0.105	4.78	0.018	.	0.004	0.45	0.023	0.006	.	0.004
1	IARM FeE9310-18	0.121	0.62	0.009	0.0128	0.256	0.158	3.07	1.09	0.036	.	.	0.086	0.0070	0.0072	.	0.0030
2	HRT FE2009-N	0.12	0.55	0.010	0.003	0.32	0.08	0.25	2.56	0.030	.	.	1.02	.	.	.	0.015
1	BS 45C	0.116	0.482	0.0077	0.016	0.69	0.129	0.078	1.37	0.018	.	(0.003)	0.57	0.0082	0.0071	0.0012	0.0028
1	VS UG115	0.115	0.43	0.0084	0.012	0.227	0.173	1.63	0.81	0.024	.	.	0.0126	0.013	.	0.0014	.
1	IARM FeF11-21	0.114	0.530	0.0067	0.0141	0.679	0.123	0.069	1.349	0.018	.	0.0048	0.614	.	0.0084	0.0015	0.0038
1	BS 9905A	0.113	0.465	0.0133	0.0040	0.34	0.091	0.152	8.75	0.0186	.	0.0065	0.95	0.034	0.0060	0.0023	0.216
1	IMZ 75A	0.112	0.394	0.080	0.016	0.618	0.428	0.041	0.401	0.009	.	.	0.018	0.0024	0.023	0.023	0.013
1	12X 11572A	0.111	0.498	0.0069	0.0025	0.649	0.0576	0.0977	1.107	0.0290	.	0.0030	0.499	0.0058	0.0049	.	.
1	BS 48B	0.110	0.365	0.0228	0.0068	0.75	0.070	0.165	8.78	0.0157	.	0.0048	0.949	0.0088	0.0049	0.0031	0.033
1	IARM FeDP1080-18	0.110	1.88	0.014	(0.006)	0.11	0.042	0.554	0.554	(0.002)	.	.	0.445	(0.009)	(0.0064)	(0.0013)	(0.0043)
1	SRM 1138a	0.11	0.35	0.035	0.056	0.25	0.09	0.10	0.13	.	.	.	0.05	.	.	.	0.02
1	IPT 500A	0.107	0.842	0.016	0.0049	0.281	0.270	0.018	0.611	0.046	.	0.0020	0.0018	0.0092	0.0018	0.0015	0.0029
1	VS UG142	0.107	0.54	0.051	0.012	0.61	0.794	0.129	2.91	0.084	.	0.006	0.80	0.020	0.0126	0.0075	0.42
1	IPT 500	0.106	0.844	0.016	0.0048	0.282	0.270	0.018	0.612	0.046	.	0.0020	0.0013	0.0092	0.002	0.0014	0.003
1	12X LA1B	0.104	1.262	0.0090	0.060	0.777	0.0572	0.210	1.026	0.0104	.	0.0212	0.068	0.0144	.	.	0.448
1	BS 3310	0.104	0.54	0.0092	0.0144	0.257	0.199	3.49	1.55	0.035	.	0.0058	(0.052)	0.0075	0.0103	0.0010	0.0029
2	HRT FE2003-H	0.104	0.46	0.013	0.002	0.43	0.05	0.26	8.66	(0.004)	.	.	0.93	.	.	.	0.217
1	13X 90901A	0.102	0.447	0.0148	0.0009	0.429	0.039	0.249	8.43	0.021	.	.	0.905	0.0472	0.0020	(0.0025)	0.208
1	IMZ 68	0.102	0.346	0.028	0.015	0.13	0.166	0.049	0.33	.	.	0.0057	.	0.0086	0.0066	0.0033	0.046
1	IARM Fe91-18	0.099	0.453	0.015	(0.002)	0.27	0.041	0.187	8.24	(0.006)	.	.	0.94	0.046	(0.004)	(0.0021)	0.198
1	IMZ 169	0.099	0.54	0.015	0.0155	0.35	0.128	0.073	2.20	0.075	.	.	1.03	0.0193	0.062	0.001	(0.016)
3	BS 58C	0.098	0.57	0.011	0.014	0.29	0.14	3.20	1.29	(0.055)	.	.	0.11	.	(0.012)	.	.
1	IARM 37C	0.096	0.408	0.014	(0.004)	0.31	0.121	0.148	4.34	(0.010)	.	(0.009)	0.500	0.008	0.009	(0.0025)	0.017
1	IARM FeP92-18	0.092	0.737	(0.005)	(0.005)	0.20	0.074	0.82	9.4	(0.005)	.	.	0.52	(0.0036)	(0.006)	(0.003)	0.188
1	VS UG6/11	0.091	0.691	0.028	0.022	0.96	0.449	0.640	0.759	0.0107	.	.	0.0082	0.0083	.	.	0.0075
1	BS 9310	0.091	0.638	0.010	0.0053	0.224	0.146	3.04	1.16	0.028	.	0.0048	0.093	0.0107	0.0078	0.0011	0.0035
1	KUT T3/2	0.09	0.60	0.058	0.033	0.66	0.10	0.11	0.40	.	.	.	.	.	.	(<0.01)	.
1	IARM 268B	0.087	0.58	0.011	0.035	0.21	0.31	0.127	0.094	0.002	.	<0.005	0.033	0.0015	0.010	<0.001	0.047
1	IMZ 204	0.085	0.36	0.014	0.008	0.40	0.075	0.034	0.111	4.21	.	.	(0.007)	(0.0052)	.	0.035	.
1	SRM 1226	0.085	0.274	0.0022	0.0044	0.231	0.125	5.42	0.467	0.054	.	.	0.446	.	(0.003)	0.0021	0.0018
1	DSZU C050	0.082	1.21	0.040	0.065	0.287	0.304	0.118	0.075	(0.008)	.	(0.002)	0.48	.	(0.004)	(0.002)	0.007
1	SRM 1270A	0.0794	0.636	0.00401	0.00635	0.237	0.1168	0.1772	2.317	.	.	0.0172	0.9422	.	0.01609	0.00158	0.01298
1	IMZ 160	0.077	0.38	0.023	0.004	0.34	0.42	0.30	2.64	0.031	.	.	0.98	.	.	.	0.10
1	SRM 1270	0.077	0.626	0.0065	0.0065	0.247	0.114	0.174	2.34	.	.	.	0.956	.	.	.	0.013
1	IMZ 72A	0.076	0.333	0.081	0.012	0.282	0.288	0.050	0.530	0.021	.	0.013	0.021	0.0050	0.014	0.019	0.011
1	IMZ 159	0.075	0.39	0.022	0.005	0.33	0.41	0.31	2.64	0.024	.	.	0.98	.	.	.	0.10
1	NCS HS20745	0.068	0.813	0.1	0.024	0.33	0.297	.	.	.	.	.	.	.	.	.	0.022
1	IARM FeT23-18	0.068	0.82	0.012	0.006	0.18	0.046	0.53	2.47	.	.	.	0.261	(0.003)	(0.004)	(0.004)	0.238
1	SRM 1271	0.064	0.73	0.005	0.0013	0.334	1.48	3.34	0.552	0.020	.	.	0.543	.	.	.	0.003

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment
BS 46B	.	.	.	.	0.0074	95.7	(0.0003)	(0.003)	0.0026	(0.001)	(0.002)	.	0.0008	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm	17025
12X 15256Q	.	.	.	.	0.493	.	.	0.0509	.	.	.	.	0.101	.	.	Disc ~40 mm Ø x ~15 mm	
12X 93106A	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm	
BS 47B	.	.	.	.	.	.	.	.	(0.004)	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	
IARM FeE9310-18	.	.	.	.	0.009	94.6	.	.	(0.0017)	.	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
HRT FE2009-N	.	.	0.0020	.	.	.	.	.	.	.	.	.	.	0.004	.	Disc 40 mm Ø x 40 mm	
BS 45C	0.0003	.	0.0008	.	0.0059	96.5	0.0002	(0.002)	0.0010	<0.005	(0.002)	.	(0.003)	.	<0.05	Disc 38 mm Ø x ~7 or 19+ mm	17034
VS UG115	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~25 mm	
IARM FeF11-21	0.0004	.	.	.	0.0062	.	.	.	.	.	0.0017	.	.	.	.	Disc 38 mm Ø x 2 or 19 mm	
BS 9905A	(0.0005)	.	(0.0002)	.	0.0136	88.9	(0.0004)	0.074	0.0024	(0.002)	(0.003)	(0.01)	0.0024	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm	17025
IMZ 75A	0.0021	.	.	.	0.0037	.	.	0.024	.	.	.	.	.	.	.	Disc 38 mm Ø x 20 mm	
12X 11572A	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0009	.	Disc 38 mm Ø x ~15 mm	
BS 48B	(0.0002)	.	(0.003)	.	0.0165	88.7	(0.0002)	(0.001)	0.0022	(0.0002)	(0.001)	.	0.026	(0.0003)	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm	17025
IARM FeDP1080-18	.	.	.	.	0.069	.	.	0.014	(0.0055)	.	.	.	(0.030)	.	.	Disc 31 mm Ø x 2 or 18 mm	
SRM 1138a	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 13 mm	
IPT 500A	(0.0004)	.	(0.0025)	.	0.0044	.	.	0.0083	.	.	.	.	.	.	.	Disc 35 mm Ø x 15 mm	
VS UG142	.	0.012	0.0010	(0.04)	0.087	.	.	0.049	.	0.041	0.028	.	0.83	0.0057	.	Disc ~37 mm Ø x ~20 mm	
IPT 500	.	.	.	.	0.0046	.	.	0.008	.	.	.	.	.	.	.	Disc 34 mm Ø x 18 mm	
12X LA1B	.	.	.	.	0.0144	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
BS 3310	(0.0008)	.	(0.001)	.	0.0096	93.7	(0.0008)	(0.0009)	(0.0008)	(0.0005)	0.0019	0.007	(0.003)	.	(0.001)	Disc 44 mm Ø x ~7 or 19+ mm	17034
HRT FE2003-H	0.0004	.	.	.	0.013	.	.	0.064	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm	
13X 90901A	.	.	.	.	.	.	.	0.070	.	.	.	.	0.009	.	.	Disc ~40 mm Ø x ~15 mm	
IMZ 68	.	.	.	.	0.008	.	.	.	.	.	0.0020	.	.	.	.	Disc 38 mm Ø x 20 mm	
IARM Fe91-18	.	.	.	.	0.013	.	.	0.070	(0.003)	.	.	.	(0.003)	.	.	Disc 31 mm Ø x 2 or 18 mm	
IMZ 169	.	.	.	.	0.012	.	.	(0.0045)	.	(0.001)	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
BS 58C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 39 mm Ø x ~17 mm	last
IARM 37C	.	.	.	.	0.015	.	.	(0.004)	.	.	.	.	(0.012)	.	.	Disc 31 mm Ø X 2 or 18 mm	
IARM FeP92-18	0.0026	.	.	.	0.036	.	.	0.096	(0.013)	.	.	.	1.97	.	.	Disc 31 mm Ø x 2 or 18 mm	
VS UG6/11	.	.	.	.	0.0392	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	
BS 9310	<0.005	.	0.0002	H:0.0002	0.013	94.5	<0.005	<0.05	0.0009	<0.005	0.0019	.	<0.05	<0.005	0.0010	Disc 41 mm Ø x ~7 or 19 mm	17025, 17034
KUT T3/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x 39 mm	
IARM 268B	0.0011	.	.	.	0.003	.	.	0.006	(0.015)	<0.003	.	.	0.01	.	<0.001	Disc 31 mm Ø x 2 or 18 mm	
IMZ 204	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 36 mm Ø x 20 mm	
SRM 1226	.	.	.	.	0.029	.	.	(0.005)	.	(0.0001)	.	.	(0.005)	.	(0.010)	Disc 32 mm Ø x 19 mm	
DSZU C050	(0.002)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm	
SRM 1270A	0.00448	.	.	.	0.0399	.	.	.	.	.	.	.	.	.	0.0064	Disc 32 mm Ø x 19 mm	
IMZ 160	.	.	.	.	.	.	.	.	.	.	.	.	0.26	.	.	Disc 40 mm Ø x 40 mm	
SRM 1270	.	.	.	.	0.038	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm	
IMZ 72A	0.0009	.	.	.	0.024	.	.	.	.	.	0.013	.	0.023	.	.	Disc 38 mm Ø x 19 mm	
IMZ 159	.	.	.	.	.	.	.	.	.	.	.	.	0.26	.	.	Disc 40 mm Ø x 40 mm	
NCS HS20745	.	.	.	0.014	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 40 mm	La: 0.0076
IARM FeT23-18	0.0020	.	.	.	0.085	.	.	0.052	0.0044	.	.	.	1.60	.	.	Disc 31 mm Ø x 2 or 18 mm	
SRM 1271	.	.	.	.	.	.	.	0.025	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm	

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment

LOW ALLOY STEEL CHART 8 of 8

= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	As	Mo	N	Sn	Ti	V
1	VS UG117	0.064	1.41	0.012	0.021	0.60	0.214	0.072	0.129	0.018	.	.	(0.005)	0.0085	.	0.018	.
2	CZ CM-7A	0.05	1.17	0.011	0.016	0.56	0.09	0.05	0.10	0.13	.	0.005	0.015	0.01	0.008	0.14	0.012
1	SS 421	(0.049)	(0.11)	(0.012)	(0.027)	(0.07)	.	.	.	.	.	.	(0.028)	.	.	.	(<0.02)
1	12X 12746V	0.048	1.19	0.034	0.064	0.156	0.646	0.226	0.374	0.459	.	0.051	0.658	.	0.264	0.088	0.0208
1	VS UG82	0.046	1.83	(0.003)	(0.004)	0.334	0.056	0.201	0.59	.	.	.	0.93	.	.	.	0.56
1	VS UG102	0.045	1.78	0.0082	.	0.222	0.172	0.277	0.0143	0.036	.	.	0.209	.	.	.	.
1	VS UG97	0.041	0.59	0.0036	0.0025	0.194	0.0040	0.0048	0.0080	0.51	.	.	0.019	.	.	0.154	(0.001)
1	VS RG26	0.028	0.75	0.0037	.	0.173	0.011	.	0.025	0.30	.	.	0.015	.	.	0.121	.
2	IARM 168A	0.003	0.12	0.030	0.064	0.46	0.009	2.32	0.004	0.19	.	(0.003)	0.69	0.0002	0.003	0.004	0.004
1	SS 117	0.0015	0.1139	0.0093	0.00061	0.00286	0.0150	0.0196	0.0196	0.0283	.	0.00175	0.00207	0.00148	0.00152	0.0174	0.00104

| # | Number | C | Mn | P | S | Si | Cu | Ni | Cr | Al | Als | As | Mo | N | Sn | Ti | V |

Number	B	Bi	Ca	Ce	Co	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment
VS UG117	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~25 mm	
CZ CM-7A	0.0003	.	.	.	0.007	.	.	0.004	.	(0.0014)	(0.0003)	.	0.01	.	0.042	Disc ~39 mm Ø x 25 mm	
SS 421	.	.	.	.	.	.	.	.	.	.	.	.	0.52	.	.	Disc 38 mm Ø x 19 mm	
12X 12746V	.	.	.	.	0.142	.	.	.	.	.	.	.	0.105	.	.	Disc ~40 mm Ø x ~15mm	
VS UG82	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~28 mm	
VS UG102	.	.	0.0018	.	.	.	.	0.071	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~25 mm	
VS UG97	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~28 mm	
VS RG26	.	.	.	.	.	.	.	.	.	.	.	.	0.0052	.	.	Disc ~45 mm Ø x ~28 mm	
IARM 168A	0.0004	.	.	(0.0002)	0.003	.	.	0.003	0.0008	(<0.01)	.	.	0.52	.	.	Disc 31 mm Ø x 2 mm	
SS 117	.	.	.	.	0.0065	.	.	0.0186	.	0.000069	.	.	.	.	.	Disc 44 mm Ø x 19 mm	

| Number | B | Bi | Ca | Ce | Co | Fe | Mg | Nb | O | Pb | Sb | Ta | W | Zn | Zr | Units | Comment |

CRM LOW ALLOY STEEL WITH EXTENSIVE ANALYSIS

analysis listed in mass % — 31-34 mm Ø x 19 mm

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	As	Co	Mo	Nb	Pb	Sn	Ta	Ti	V	W	Zr
SRM 1264a	0.87	0.25	0.010	0.025	0.067	0.25	0.14	0.06	(0.008)	0.010	0.15	0.49	0.15	0.0022	(0.008)	0.11	0.24	0.10	0.10	0.069

continued — analysis listed in mass % — analysis listed in mg/kg

Number	B	Bi	Fe.diff	Ge	Sb	Te	Zn	Ag	Au	Ca	Ce	H	Hf	La	Mg	N	Nd	O	Pd	Se	Sr
SRM 1264a	(0.011)	(0.0009)	[96.7]	(0.003)	0.034	0.00018	(0.001)	(0.2)	1	0.4	2	(<5)	(13)	0.7	1.5	(32)	0.7	(10)	(0.3)	(2.1)	(5)

LOW ALLOY STEEL XRF SET

Part Number: BS LAS-24 Set of 24 samples, each 35 - 45 mm Ø x 7 mm discs **CRM, 17025, 17034** others are RM

Alloy	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	As	Ca	Co	N	Sn	V
300M	BS 4340M	0.414	0.74	0.004	<0.001	1.65	0.134	1.78	0.78	0.35	0.076	0.007	.	0.013	0.0020	0.009	0.056
1345	BS XCCV	0.44	1.75	0.012	0.024	0.28	0.015	0.019	0.041	0.007	0.033	0.0023	.	0.006	0.0056	(0.0004)	(<0.003)
3115	BS XCCT	0.158	0.52	0.005	0.011	0.28	0.027	1.27	0.65	0.020	0.006	0.004	.	0.017	0.0076	(0.002)	0.031
4130	BS 3932	0.321	0.54	0.016	0.018	0.33	0.200	0.19	1.00	0.229	0.020	0.004	0.0043	0.011	0.0070	0.012	0.005
4140	BS 1962	0.41	0.94	0.007	0.011	0.242	0.224	0.16	1.05	0.229	0.018	0.007	.	0.008	0.0095	0.010	0.004
4150 + S	**BS 42**	0.516	1.24	0.021	0.073	0.235	0.252	0.183	0.67	0.190	0.020	(0.004)	.	0.012	0.0080	0.012	0.003
4330	**BS 4330MOD**	0.316	0.92	0.0052	0.0010	0.269	0.105	1.83	0.848	0.478	0.031	0.0038	(0.001)	0.034	0.0031	0.0062	0.083
4340	BS 4340	0.418	0.695	0.0119	0.0187	0.279	0.149	1.79	0.807	0.231	0.028	0.0043	0.0005	0.0068	0.0080	0.0063	0.0033
4615	BS 51E	0.15	0.59	0.010	0.021	0.28	0.22	1.75	0.14	0.21	0.028	.	.	0.035	0.0086	0.010	(0.0011)
4620	BS 4620	0.189	0.57	0.006	0.018	0.25	0.216	1.75	0.072	0.24	0.032	(0.0084)	(0.0001)	0.012	0.0078	0.013	(0.0008)
4820	BS 4820	0.188	0.57	0.010	0.025	0.25	0.11	3.29	0.12	0.21	0.020	0.005	0.0046	0.008	0.0079	(0.008)	(0.002)
6150	**BS 43A**	0.49	0.82	0.0074	0.025	0.252	0.18	0.24	0.92	0.059	(0.003)	(0.005)	(0.0006)	0.008	0.0072	0.011	0.145
8620	BS 1931	0.194	0.84	0.007	0.018	0.235	0.116	0.42	0.50	0.168	0.021	0.007	(0.0008)	0.012	0.0079	0.007	0.002
8822	BS 8822	0.228	0.92	0.011	0.025	0.26	0.17	0.47	0.52	0.34	0.022	0.007	(0.0004)	0.019	0.0085	0.011	0.003
8740	BS 67B	0.40	0.94	0.007	0.020	0.23	0.19	0.53	0.51	0.22	0.024	.	.	0.011	0.0078	0.009	(0.002)
9310	BS 58D	0.127	0.45	0.010	0.005	0.32	0.156	3.02	1.35	0.14	0.042	.	.	0.009	0.0147	0.012	0.005
9325	BS 9325	0.25	0.91	0.008	0.007	0.32	0.13	3.29	1.48	0.31	0.030	(0.004)	0.0049	0.010	0.0089	0.009	0.004
P-20	BS 55E	0.307	0.72	0.014	0.024	0.60	0.032	0.053	1.66	0.40	(0.004)	.	.	(0.005)	0.0096	0.002	0.019
AMS 6418	BS 69B	0.2258	1.28	0.008	0.013	1.27	0.086	1.71	0.28	0.39	0.024	.	.	0.035	0.0057	0.006	(0.002)
A193	BS 4942	0.414	0.56	0.015	0.021	0.22	0.165	0.16	0.97	0.54	(0.004)	0.005	0.0006	0.010	0.0080	0.014	0.28
A485-1	BS A485-1	0.98	1.10	0.019	0.004	0.62	0.16	0.13	1.07	0.029	0.017	0.006	.	0.010	0.0060	0.011	0.003
E52100	BS 53E	1.08	0.37	0.007	0.012	0.24	0.11	0.26	1.45	0.10	0.003	.	.	0.011	0.0086	0.005	0.004
Nitriding	BS 68C	0.38	0.60	0.018	0.008	0.305	0.178	0.166	1.77	0.36	1.06	(0.004)	(0.0002)	0.011	0.0045	0.008	0.007
LF 3	BS LF 3	0.183	0.52	0.006	0.018	0.206	0.080	3.36	0.098	0.056	0.017	0.006	(0.0001)	0.056	0.0054	0.006	(0.002)
Alloy	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	As	Ca	Co	N	Sn	V

CRM SOLUBLE ELEMENTS IN LOW ALLOY STEEL SET

available in set/7 only -S = Soluble, -T = Total 38 mm Ø x 30 mm

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al-S	Al-T	B-S	B-T	Mo
NCS HS11717a-1	0.0023	0.018	0.012	0.0027	0.0054	0.0036	0.011	0.023	0.0069	0.0078	0.0002	0.0004	0.0053
NCS HS11717a-2	0.0028	0.104	0.014	0.011	0.077	0.049	0.045	0.042	0.024	0.026	0.0011	0.0012	0.304
NCS HS11717a-3	0.032	0.303	0.018	0.067	1.55	0.403	0.563	0.236	0.295	0.298	0.0018	0.0020	0.034
NCS HS11717a-4	0.096	0.669	0.012	(0.050)	1.09	0.316	0.400	0.102	0.214	0.216	0.0085	0.0096	0.144
NCS HS11717a-5	0.243	1.04	0.030	0.042	0.769	0.248	0.393	0.106	0.101	0.104	0.0071	0.0074	0.105
NCS HS11717a-6	0.387	1.47	0.038	0.030	0.436	0.167	0.206	0.409	0.050	0.051	0.0047	0.0049	0.071
NCS HS11717a-7	0.498	2.10	0.050	0.022	0.176	0.075	0.107	0.612	0.022	0.024	0.0031	0.0033	0.196

Number	As	Bi	Co	N	Nb	Pb	Sb	Sn	Ti	V
NCS HS11717a-1	0.0034	(<0.00001)	0.0015	0.0016	(<0.0005)	(<0.0001)	0.00041	0.00020	0.0002	(0.0001)
NCS HS11717a-2	0.011	(<0.00001)	0.058	0.0017	0.031	(<0.0001)	0.00031	0.0073	0.020	0.011
NCS HS11717a-3	0.019	(<0.00001)	0.099	0.0032	0.079	(<0.0001)	0.00041	0.016	0.049	0.052
NCS HS11717a-4	0.073	(0.00001)	0.146	0.0031	0.223	(<0.0001)	0.00044	0.049	0.202	0.098
NCS HS11717a-5	0.071	(0.00001)	0.296	0.0048	0.318	(<0.0001)	0.00052	0.099	0.178	0.257
NCS HS11717a-6	0.045	(0.00001)	0.248	0.0049	0.106	(<0.0001)	0.00048	0.151	0.124	0.201
NCS HS11717a-7	0.034	(0.00001)	0.198	0.0063	0.153	(<0.0001)	0.00050	0.197	0.088	0.147

RM TOOL STEEL XRF SET

Part Number: BS TS-18 AVAILABLE INDIVIDUALLY **17025** ~7 mm discs

Grade	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	W	V	Co	N
A-2	BS 36C	0.96	0.46	0.023	0.027	0.31	0.18	0.19	5.01	0.99	.	(0.04)	0.11	0.03	.
A-10	BS A-10	1.41	1.75	0.016	0.022	1.15	0.16	1.82	0.24	1.53	0.006	<0.005	(0.004)	(0.010)	.
D-2	BS 37D	1.54	0.28	0.021	0.015	0.29	0.063	0.21	11.07	1.09	.	0.16	0.80	0.07	0.016
H-10	BS 49	0.36	0.33	0.014	0.015	0.92	0.072	0.20	3.51	2.41	0.004	0.31	0.62	2.00	0.0186
H-11	BS TH11	0.423	0.31	0.016	0.005	0.88	0.041	0.11	5.04	1.27	.	(0.01)	0.46	(0.008)	.
H-12	BS TH12	0.372	0.40	0.020	0.005	0.92	0.064	0.16	5.02	1.41	.	1.06	0.62	0.07	.
H-13	BS 34D	0.395	0.38	0.017	0.005	1.06	0.049	0.10	5.15	1.24	.	0.10	0.94	0.031	.
L-6	**BS 39B**	0.67	0.62	0.009	0.019	0.214	0.163	1.45	0.79	0.17	(0.011)	.	(0.01)	(0.02)	.
M-1	BS TM1	0.86	0.23	0.007	0.012	0.46	0.054	0.057	3.72	8.4	.	1.7	1.05	0.45	.
M-2	BS 32C	0.84	0.29	(0.018)	0.0010	0.29	0.13	0.35	3.98	4.85	(0.02)	6.3	2.03	0.31	.
O-1	**BS 35D**	0.879	1.13	0.021	0.024	0.22	0.141	0.132	0.495	0.035	(0.005)	0.46	0.181	0.012	.
O-6	**BS 41**	1.41	0.89	0.013	0.011	1.02	0.038	0.15	0.22	0.23	(0.007)	0.035	0.046	.	.
S-1	BS 33E	0.49	0.29	0.022	0.005	0.20	0.038	0.08	1.25	0.045	.	2.75	0.19	0.006	.
S-5	BS 38C	0.60	0.81	0.011	0.012	2.08	0.26	0.24	0.28	0.41	0.015	0.004	0.214	0.036	0.0081
S-7	BS TS7	0.529	0.70	0.016	0.010	0.27	0.05	0.10	3.18	1.34	.	0.19	0.35	0.043	.
T-1	**BS 30D**	0.745	0.348	0.029	0.0010	0.301	0.116	0.191	3.93	0.342	0.0123	17.73	1.077	0.101	0.0168
	BS 10V	2.46	0.52	0.019	0.079	0.89	0.076	0.08	5.41	1.30	<0.002	0.013	9.50	0.009	0.064
HP9-4-30	BS 9-4-30	0.30	0.22	0.008	<0.001	0.06	0.09	7.25	1.00	1.00	0.004	0.01	0.085	4.40	0.0015
Grade	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	W	V	Co	N

TOOL STEEL CHART 1 of 4

= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
1	BS PM15	3.54	0.416	0.0198	0.0127	0.912	0.142	0.203	5.33	0.0025	0.0330	1.22	0.111	0.0029	14.79	0.109
1	IARM Fe15V-18	3.51	0.39	0.022	0.010	0.89	0.084	0.123	5.5	.	0.018	1.24	.	0.0027	15.6	0.080
2	BS 10V	2.46	0.52	0.019	0.079	0.89	0.076	0.08	5.41	(<0.002)	0.009	1.30	0.064	.	9.50	0.013
1	DSZU C070	2.43	0.38	0.021	0.054	0.79	0.130	0.153	5.57	.	0.053	1.28	.	.	9.39	0.29
1	BS A-11	2.42	0.507	0.023	0.123	0.98	0.092	0.25	5.21	0.0054	0.044	1.25	0.110	0.0019	9.24	(0.080)
1	DSZU C082	2.32	0.33	0.029	0.014	0.36	0.118	0.239	12.24	.	0.035	1.11	.	.	4.02	0.17
1	DSZU C080	1.68	0.31	0.025	0.020	1.89	0.120	0.162	5.06	.	0.028	0.39	.	.	5.12	3.40
1	BS 37G	1.663	0.326	0.021	0.0007	0.352	0.044	0.152	11.77	0.0060	0.0166	0.78	0.0310	0.0025	0.70	0.034
1	BS TS15	1.64	0.27	(0.017)	0.067	0.357	0.065	(0.18)	4.12	0.0032	4.87	0.48	0.045	0.0016	4.81	11.6
1	ECRM 274-1D	1.563	0.397	0.0148	0.0096	1.057	0.0281	0.077	8.036	(0.0025T)	(0.0230)	1.4551	0.0769	(0.0011)	4.010	0.0087
1	BS 37H *	1.56	0.30	0.027	0.001	0.31	0.20	0.35	11.7	0.010	0.020	0.79	0.030	0.002	0.61	0.028
2	BS 37D	1.54	0.28	0.021	0.015	0.29	0.063	0.21	11.07	.	0.07	1.09	0.016	.	0.80	0.16
2	HRT FE2019-H	1.54	0.39	0.025	(0.003)	0.51	0.08	0.14	11.89	0.015	.	0.86	.	0.012	0.80	.
2	CT D2	1.53	0.48	0.013	0.005	0.40	0.04	0.10	11.46	.	0.02	0.75	.	.	0.89	<0.01
1	IARM 41D	1.519	0.256	0.021	0.012	0.256	0.047	0.114	11.5	0.014	(0.020)	0.74	0.0152	(0.003)	0.77	0.034
2	BS 37E	1.51	0.29	0.024	0.002	0.37	0.053	0.34	11.54	0.002	0.021	0.79	0.052	0.002	0.78	0.021
2	BS 41A	1.50	0.93	0.004	0.001	0.97	0.034	0.17	0.20	0.010	0.006	0.19	0.0077	0.004	(0.003)	(<0.003)
2	IARM 45B	1.42	0.90	0.010	0.008	0.92	0.018	0.024	0.061	0.010	0.004	0.24	0.0080	0.002	(0.003)	(0.004)
1	IARM FEM4-18	1.42	0.298	0.013	0.062	0.60	0.104	0.127	4.16	.	0.080	5.07	0.042	0.0018	3.97	5.55
2	BS 41	1.41	0.89	0.013	0.011	1.02	0.038	0.15	0.22	(0.007)	.	0.23	.	.	0.046	0.035
2	BS A-10	1.41	1.75	0.016	0.022	1.15	0.016	1.82	0.24	0.006	(0.010)	1.53	.	.	(0.004)	<0.005
1	IARM 251A	1.398	0.33	0.014	0.058	0.58	0.13	0.131	4.1	0.01	0.129	5.16	0.044	0.003	3.9	5.5
2	IARM 45A	1.39	0.88	0.014	0.012	1.02	0.049	0.11	0.13	0.011	0.004	0.25	0.0079	0.003	0.005	.
2	CT X35568	1.36	0.14	0.006	0.002	0.19	0.10	0.054	0.076	.	.	0.017	.	.	.	3.20
2	CT X27081	1.32	0.20	0.004	0.001	0.24	0.026	0.031	0.052	.	.	0.008	.	.	.	3.39
1	DSZU C073	1.32	0.23	0.019	0.013	0.27	0.112	0.198	3.97	.	8.31	4.97	.	.	2.82	6.40
1	IARM FeM62-18	1.32	0.27	0.016	0.015	0.37	0.115	0.129	3.86	(0.006)	0.105	10.2	0.045	(0.003)	2.02	6.31
1	DSZU C072	1.30	0.29	0.024	0.019	0.55	0.106	0.192	4.25	.	0.011	5.39	.	.	3.59	6.33
3	CZ HS-2A	1.24	0.27	0.024	0.017	0.24	0.08	0.21	4.15	0.035	9.9	3.75	.	0.003	3.4	9.3
1	DSZU C075	1.16	0.16	0.021	0.015	0.47	0.120	0.202	3.10	.	8.03	4.06	.	.	2.10	9.27
1	DSZU C077	1.16	0.19	0.030	0.024	0.40	0.142	0.271	4.07	.	7.73	3.05	.	.	2.04	12.17
1	BS M-47	1.14	0.20	0.020	0.002	0.464	0.080	0.17	3.72	(0.002)	4.99	9.24	0.0219	(0.004)	1.23	1.36
1	ECRM 268-1D	1.134	0.293	0.0209	0.0154	0.373	0.123	0.143	4.57	.	0.0290	3.20	2.03	.	8.47	3.70
1	IMZ 102/3	1.11	0.15	0.014	(0.0045)	1.06	0.13	0.021	1.59	0.017	.	0.43	.	.	(0.012)	.
1	DSZU C074	1.10	0.16	0.023	0.020	0.16	0.141	0.158	3.93	.	5.08	5.21	.	.	1.94	6.47
1	14X 72305A	1.085	0.349	0.0128	0.0028	0.206	0.149	0.089	0.425	0.0049	.	0.0231	0.0068	.	0.0045	.
1	DSZU C071	1.06	0.20	0.020	0.028	0.38	0.162	0.149	3.77	.	8.10	9.67	.	.	1.07	1.74
1	IMZ 172	1.03	0.71	0.018	0.047	0.21	0.128	0.12	4.47	0.062	0.012	0.96	0.0192	(0.002)	0.20	0.011
1	SS 487/1	1.02	0.26	0.022	0.029	0.18	.	(0.14)	3.91	0.006	7.95	9.41	.	.	1.14	1.80
1	DSZU C081	1.01	0.32	0.017	0.011	1.10	0.124	0.207	7.78	.	0.029	2.13	.	.	0.25	0.05
2	CT M7	1.00	0.29	0.012	0.003	0.34	0.066	0.10	3.60	.	0.015	8.49	.	.	2.02	1.78

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units	Comment
BS PM15	0.0040	(0.0002)	(0.0001)	[73.0]	(0.0002)	0.014	0.0129	(0.00001)	(0.0010)	0.0034	(0.0003)	.	(0.0005)	Disc 38 mm Ø x 19+ mm	17025
IARM Fe15V-18	.	.	.	.	.	.	.	.	.	0.0054	.	.	.	Disc 38 mm Ø x 2 or 19 mm	
BS 10V	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	
DSZU C070	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
BS A-11	0.0057	0.0008	(0.0002)	79.5	(0.0005)	(0.0070)	0.028	(0.00006)	(0.001)	0.0055	.	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm	17025
DSZU C082	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~35 mm Ø x 25 mm	
DSZU C080	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~35 mm Ø x 20 or 25 mm	
BS 37G	0.0026	0.0003	0.0014	.	.	0.0026	.	0.0005	0.0009	0.0010	.	.	.	Disc 34 mm Ø x 19 mm	last
BS TS15	(0.006)	(0.0005)	(0.001)	71.4	(0.002)	0.009	(0.018)	.	.	0.0074	.	.	(0.003)	Disc 38 mm Ø x ~7 or 19+ mm	17034
ECRM 274-1D	(0.0013)	(0.0005)	.	.	.	.	(0.0026)	(0.00006)	(0.0002)	(0.0010)	.	.	.	Disc 38 mm Ø x 25 mm	
BS 37H *	0.003	<0.005	<0.005	84.0	<0.005	0.004	0.001	<0.005	0.001	0.004	* Provisional		0.001	Disc 38 mm Ø x ~7 or 19+ mm	
BS 37D	.	.	.	.	.	.	0.0031	.	.	0.004	.	.	.	Disc 37 mm Ø x ~7 or 19+ mm	
HRT FE2019-H	.	.	.	.	.	0.071	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm	
CT D2	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	
IARM 41D	(0.01)	(0.0006)	(0.0008)	.	.	(0.004)	(0.003)	(0.0008)	.	(0.005)	.	.	(0.002)	Disc 31 mm Ø x 2 or 18 mm	
BS 37E	0.002	(0.001)	.	.	.	(0.003)	(0.0025)	(0.0005)	(<0.002)	0.003	.	.	.	Disc 41 mm Ø x 19 mm	last
BS 41A	0.002	.	0.0006	.	.	.	0.002	.	.	0.002	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	ISO 25
IARM 45B	(0.002)	(0.0001)	(0.001)	.	.	(0.002)	(0.0005)	.	(0.001)	0.008	.	.	(0.001)	Disc 31 mm Ø x 2 or 18 mm	
IARM FEM4-18	0.0058	.	.	79.0	.	.	.	.	.	0.0050	.	.	.	Disc ~38 mm Ø x ~3 or ~19 mm	
BS 41	.	.	.	.	.	.	.	.	.	(0.008)	.	.	.	Disc 42 mm Ø x ~7 or 19+ mm	17025
BS A-10	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x ~7 or 19+ mm	
IARM 251A	0.016	(0.002)	(0.0005)	.	.	0.016	(0.01)	(0.002)	.	0.011	.	.	(0.002)	Disc 31 mm Ø x 2 mm	
IARM 45A	(0.003)	(0.0001)	.	.	.	0.002	(0.0017)	(<0.005)	.	0.005	.	.	.	Disc 31 mm Ø x 2 mm	
CT X35568	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	last
CT X27081	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	last
DSZU C073	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
IARM FeM62-18	.	(0.003)	.	.	.	(0.017)	(0.003)	.	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
DSZU C072	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
CZ HS-2A	.	.	.	.	.	.	.	.	.	0.01	.	.	.	Disc ~39 mm Ø x 25 mm	
DSZU C075	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
DSZU C077	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
BS M-47	0.006	.	(0.002)	.	.	(0.004)	0.0037	.	.	0.006	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	17025
ECRM 268-1D	0.0062	0.0009	.	.	.	.	.	.	0.0017	0.0078	.	.	.	Disc 38 mm Ø x 25 mm	
IMZ 102/3	.	(0.0007)	.	.	.	.	.	.	.	.	.	.	(0.007)	Disc 40 mm Ø x 40 mm	
DSZU C074	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
14X 72305A	.	.	.	.	.	.	.	.	.	0.0101	.	.	.	Disc ~40 mm Ø x ~15 mm	
DSZU C071	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
IMZ 172	.	.	.	.	.	.	.	.	.	0.010	.	.	.	Disc 40 mm Ø x 40 mm	
SS 487/1	(0.012)	.	.	.	.	.	.	.	.	(0.006)	.	.	.	Disc 38 mm Ø x 19 mm	
DSZU C081	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~35 mm Ø x 25 mm	
CT M7	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units	Comment

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= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
1	IARM 324A	0.99	1.01	0.009	0.028	0.163	0.22	0.081	0.42	0.002	0.007	0.022	0.0082	0.0016	0.0017	(0.003)
1	IARM 39B	0.99	0.54	0.017	0.003	0.35	0.10	0.14	4.79	0.006	0.014	1.01	0.0096	0.003	0.22	(0.026)
1	IARM 39C	0.99	0.45	0.019	0.007	0.28	0.077	0.144	4.99	0.017	0.013	0.97	0.011	0.0029	0.21	0.011
1	BS 36E *	0.98	0.55	0.019	0.002	0.27	0.052	0.14	4.91	0.014	0.014	0.99	0.009	0.003	0.20	0.015
2	BS 36D	0.97	0.68	0.021	0.007	0.27	0.060	0.089	5.25	0.010	0.010	0.96	0.0108	.	0.29	0.028
2	BS 36C	0.96	0.46	0.023	0.027	0.31	0.18	0.19	5.01	.	0.03	0.99	.	.	0.11	(0.04)
2	CT A2	0.95	0.72	0.010	0.004	0.40	0.06	0.10	5.13	.	.	1.05	.	.	0.22	.
2	CZ LA-4C	0.95	1.63	0.021	0.012	0.07	0.056	0.045	1.78	0.048	(0.006)	0.008	0.012	(0.002)	(0.010)	0.008
1	SS 485/1	0.94	0.41	0.043	0.039	0.30	.	(0.14)	4.02	(0.006)	4.97	0.66	.	.	1.02	17.8
1	IARM 320A	0.93	0.33	0.021	(0.0015)	0.36	0.091	0.204	4.22	0.023	4.90	4.79	(0.014)	0.0032	1.76	6.01
2	CT O1	0.91	1.27	0.009	0.004	0.36	0.05	0.06	0.49	.	.	0.07	.	.	0.25	0.51
1	ECRM 290-1D	0.91	0.24	0.016	0.016	0.08	0.081	0.33	4.18	.	5.12	4.81	0.0325	.	1.92	6.24
2	CT M10	0.88	0.27	0.016	0.004	0.30	0.061	0.14	3.97	.	0.012	7.89	.	.	1.99	0.008
2	BS 35D	0.879	1.13	0.021	0.024	0.22	0.141	0.132	0.495	(0.005)	0.012	0.035	.	(0.003)	0.181	0.46
2	HRT FE2023-N	0.873	1.53	0.108	0.0708	1.09	0.62	2.88	3.57	0.414	0.837	0.963	0.0142	0.165	0.597	0.462
2	BS TM1	0.86	0.23	0.007	0.012	0.46	0.054	0.057	3.72	.	0.45	8.4	.	.	1.05	1.7
1	IARM 304A	0.857	0.260	0.019	0.0016	0.36	0.14	0.133	3.55	0.009	0.278	8.04	0.034	0.002	1.23	1.65
1	IARM FeM2-18	0.853	0.337	0.025	(0.0010)	0.26	0.098	0.182	4.23	(0.014)	0.28	4.92	0.0148	(0.0016)	1.90	5.81
2	14X 14946D	0.85	0.53	0.051	0.048	0.46	0.25	1.06	5.06	.	0.44	0.21	.	.	1.03	16.9
2	BS 32D	0.85	0.30	0.027	0.0022	0.25	0.039	0.053	4.14	0.018	0.010	4.92	0.018	.	1.82	6.15
1	IARM FeM1-18	0.85	0.318	0.013	(0.003)	0.44	0.091	0.104	3.67	0.007	0.226	8.0	0.037	0.0044	1.19	1.98
1	IARM 306B	0.84	0.24	0.006	(0.001)	0.21	0.058	0.095	4.12	0.08	0.010	4.2	0.0049	(0.002)	0.98	(0.01)
1	SRM 1157	0.836	0.34	0.011	0.004	0.18	0.088	0.228	4.36	.	0.028	4.86	.	.	1.82	6.28
1	BS M-50	0.834	0.244	0.0066	0.0009	(0.205)	0.064	0.074	4.28	0.073	0.0151	4.29	0.0057	(0.0018)	0.99	0.0052
2	14X 14948C	0.83	0.65	0.011	0.017	0.26	0.04	0.29	4.04	.	0.16	0.14	.	.	0.65	18.8
2	CT M2	0.82	0.33	0.012	0.004	0.27	0.06	0.25	4.03	.	0.05	4.96	.	.	1.81	6.47
1	IARM 44C	0.82	0.301	0.027	0.004	0.31	0.12	0.132	4.04	0.05	0.247	5.02	0.033	0.004	1.91	6.0
2	CT M1	0.80	0.30	0.012	0.005	0.22	0.087	0.12	3.91	.	.	8.22	.	.	1.05	1.58
1	IARM FeT1-18	0.80	0.295	0.026	(<0.0010)	0.30	0.034	0.14	3.98	0.054	0.096	0.124	0.0195	0.026	1.05	18.0
1	BS 30D	0.745	0.348	0.029	0.0010	0.301	0.116	0.191	3.93	0.0123	0.101	0.342	0.0168	0.0189	1.077	17.73
1	IARM 281A	0.74	0.30	0.015	0.019	0.29	0.096	0.15	3.89	0.007	4.8	0.49	0.0064	0.004	0.90	17.6
1	SS 486/1	0.74	0.21	0.029	0.021	0.27	.	(0.06)	4.54	(0.005)	0.08	5.20	.	.	1.82	5.80
3	CZ HS-1A	0.72	0.28	0.023	0.011	0.28	0.08	0.14	4.15	0.03	4.7	0.06	.	0.003	1.33	17.5
1	IARM 40C	0.72	1.91	0.014	0.012	0.32	0.142	0.255	0.99	0.019	0.010	1.27	0.0083	0.008	0.010	0.009
1	IARM FeL6-18	0.718	0.605	0.013	0.0017	0.264	0.027	1.34	0.71	0.020	0.007	0.237	0.0064	0.0033	0.008	.
2	BS 40B	0.71	2.28	0.020	0.006	0.35	0.076	0.089	1.18	0.002	0.020	1.07	0.0076	0.002	0.10	0.11
1	DSZU C076	0.69	0.18	0.024	0.022	0.58	0.120	0.213	5.75	.	13.88	4.29	.	.	2.03	9.81
1	IARM 40B	0.68	1.98	0.012	0.003	0.39	0.050	0.096	1.04	(0.006)	0.015	1.22	0.0107	0.003	0.014	0.013
2	BS 39B	0.67	0.62	0.009	0.019	0.214	0.163	1.45	0.79	(0.011)	(0.02)	0.17	.	.	(0.01)	.
1	DSZU C078	0.67	0.22	0.022	0.019	0.117	0.116	0.121	3.98	.	0.022	0.14	.	.	1.04	18.30
1	SS 483/1	0.65	0.22	0.023	0.023	0.16	.	(0.08)	2.90	.	2.06	0.18	.	.	0.22	9.28
2	BS 38C	0.60	0.81	0.011	0.012	2.08	0.26	0.24	0.28	0.015	0.036	0.41	0.0081	0.007	0.214	0.004

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units	Comment
IARM 324A	0.006	0.0004	0.0009	.	.	0.014	0.003	.	(0.002)	0.011	.	.	(0.001)	Disc 31 mm Ø x 2 mm	
IARM 39B	.	.	.	.	.	0.006	.	.	.	0.004	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
IARM 39C	(0.005)	0.001	(0.001)	.	.	0.0040	0.001	(0.0001)	(0.002)	0.005	.	.	(0.002)	Disc 31 mm Ø x 2 or 18 mm	
BS 36E *	<0.005	<0.005	<0.005	91.8	.	0.003	0.001	<0.005	0.003	0.007	* Provisional		0.001	Disc 38 mm Ø x ~7 or 19+ mm	
BS 36D	0.002	.	.	.	.	.	.	.	.	0.016	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	
BS 36C	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	
CT A2	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	
CZ LA-4C	(0.003)	0.0005	.	.	.	0.053	.	.	.	(0.006)	.	.	.	Disc ~37 mm Ø x 25 mm	
SS 485/1	(0.022)	.	.	.	.	.	.	.	.	0.019	.	.	.	Disc 38 mm Ø x 19 mm	
IARM 320A	0.013	0.0011	.	.	.	(0.015)	(0.0021)	.	.	0.008	.	.	(0.003)	Disc 31 mm Ø x 2 or 18 mm	
CT O1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~19 mm	
ECRM 290-1D	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 36 to 41 mm Ø x 28 to 35 mm	
CT M10	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	
BS 35D	.	.	.	.	.	(0.001)	.	.	.	0.006	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	17025
HRT FE2023-N	0.097	0.0142	0.0021	.	.	0.674	.	0.0338	0.0793	0.113	(0.31)	0.0306	0.111	Disc 37 mm Ø x 40 mm	Te: 0.0208
BS TM1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	
IARM 304A	(0.01)	0.002	(0.002)	.	.	0.021	0.002	.	(0.001)	0.006	(0.002)	.	(0.002)	Disc 31 mm Ø x 2 mm	
IARM FeM2-18	(0.008)	.	.	81.4	.	(0.021)	(0.0016)	.	.	(0.007)	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
14X 14946D	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
BS 32D	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	
IARM FeM1-18	.	.	.	.	.	.	.	.	.	0.0041	(0.0024)	.	0.0013	Disc ~38 mm Ø x ~3 or ~19 mm	
IARM 306B	(0.003)	(0.001)	.	.	.	0.007	(0.001)	(0.001)	0.0025	0.004	.	.	(0.002)	Disc 31 mm Ø x 2 or 18 mm	
SRM 1157	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø X 19 mm	
BS M-50	0.0035	(0.0001)	(0.001)	88.8	(0.0002)	0.0008	0.0010	(0.0001)	(0.0006)	0.0045	(0.00001)	.	(0.0006)	Disc 38 mm Ø x ~7 or 19+ mm	17025
14X 14948C	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm	last
CT M2	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	
IARM 44C	(0.01)	(0.002)	.	.	.	0.012	(0.003)	(0.002)	(0.004)	0.010	(0.004)	(0.006)	(0.002)	Disc 31 mm Ø x 2 mm	last
CT M1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	
IARM FeT1-18	.	.	.	.	.	(0.004)	(0.0027)	.	.	(0.010)	.	.	.	Disc 31 mm Ø x ~2 or 18 mm	
BS 30D	0.0128	(0.0002)	0.0004	[75.0]	(0.001)	0.0071	0.0019	(0.0002)	0.0032	0.0246	(0.02)	.	(0.0001)	Disc 38 mm Ø x ~7 or 19+ mm	17025
IARM 281A	(0.02)	(0.003)	.	.	(0.003)	0.094	(0.003)	.	.	0.02	.	.	(0.002)	Disc 31 mm Ø x 2 or 18 mm	
SS 486/1	(0.016)	.	.	.	.	.	.	.	.	0.014	.	.	.	Disc 38 mm Ø x 19 mm	
CZ HS-1A	.	.	.	.	.	.	.	.	.	0.02	.	.	.	Disc ~39 mm Ø x 25 mm	
IARM 40C	0.008	0.0009	(0.001)	.	.	0.003	0.0013	.	.	0.008	.	.	(0.002)	Disc 31 mm Ø x 2 or 18 mm	
IARM FeL6-18	0.0033	(0.0008)	.	.	.	(0.003)	0.0012	.	.	.	.	.	.	Disc 38 mm Ø x 2 or 19 mm	
BS 40B	0.004	0.0006	.	.	.	.	.	.	.	0.005	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	
DSZU C076	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
IARM 40B	.	(0.0010)	.	.	.	0.005	(0.0014)	.	.	0.004	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
BS 39B	.	.	.	.	.	.	.	.	.	(0.011)	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	17025
DSZU C078	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
SS 483/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
BS 38C	0.011	.	.	.	.	(0.002)	.	0.022	.	0.022	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units	Comment

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= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
1	ECRM 179-2D	0.598	0.539	0.0267	.	0.579	0.111	0.0741	1.08	.	.	0.070	0.0068	.	0.188	1.87
1	DSZU C079	0.59	0.38	0.024	0.012	0.43	0.154	0.541	4.00	.	0.039	4.10	.	.	0.90	0.06
1	IARM 47B	0.59	0.79	0.017	0.006	1.96	0.17	0.090	0.23	0.014	0.007	0.20	0.0092	0.010	0.17	(0.016)
1	BS 33F	0.569	0.295	0.0134	0.0009	0.76	0.039	0.211	1.31	0.019	0.017	0.202	0.0124	(0.002)	0.25	2.28
1	BS TS-7A	0.527	0.74	0.013	0.016	0.84	0.127	(0.031)	3.35	0.061	(0.005)	1.62	0.0124	(0.003)	0.265	(0.0014)
2	BS 33D	0.515	0.31	0.016	0.020	0.312	0.040	0.059	1.28	0.008	0.045	0.050	.	.	0.22	2.65
1	IARM FeS7-18	0.51	0.271	0.021	0.0032	0.47	0.128	0.170	3.28	(0.015)	0.0106	1.39	0.0102	0.0014	0.233	(0.016)
1	IARM 34C	0.50	0.739	0.0090	0.0011	0.30	0.078	0.085	0.914	0.068	0.005	0.022	0.0030	0.0045	0.206	(0.003)
2	BS 33E	0.49	0.29	0.022	0.005	0.20	0.038	0.08	1.25	.	0.006	0.045	.	(0.002)	0.19	2.75
1	BS 43A	0.49	0.82	0.0074	0.025	0.252	0.18	0.24	0.92	(0.003)	0.008	0.059	0.0072	(0.002)	0.145	(0.005)
2	CT X67975	0.48	0.56	0.009	0.005	0.28	0.060	0.13	1.00	.	.	0.53	.	.	0.30	.
1	IARM 259A	0.479	0.399	0.020	0.0007	0.44	0.081	0.194	3.27	0.016	0.011	1.43	0.0077	0.0026	0.256	0.035
1	SRM 1772	0.477	0.61	0.008	0.0031	0.264	0.083	0.105	3.10	.	.	1.39	.	.	0.236	.
1	BS D-6	0.472	0.78	0.007	0.0008	0.228	0.130	0.602	0.99	0.037	0.012	1.01	0.0031	0.0025	0.122	0.0018
1	BS D-6A	0.47	0.78	0.0076	0.0010	0.232	0.136	0.60	0.99	0.038	0.013	1.00	0.0031	0.0024	0.123	0.0019
1	IARM 299A	0.469	0.70	0.008	0.002	0.22	0.100	0.57	1.03	0.092	0.0054	0.99	0.0028	0.0038	0.120	0.010
1	IMZ 57/1	0.46	1.05	0.028	0.012	0.58	0.14	0.15	1.67	.	.	0.48	.	.	0.34	.
1	IARM 46B	0.45	0.27	0.019	0.0040	0.89	0.147	0.108	1.09	0.011	0.013	0.222	0.0069	0.007	0.170	1.96
2	BS TH11	0.423	0.31	0.016	0.005	0.88	0.041	0.11	5.04	.	(0.008)	1.27	.	.	0.46	(0.01)
1	IMZ 53/1	0.41	0.60	0.018	0.011	0.104	0.17	0.28	2.85	.	.	0.13	.	.	0.28	.
1	IMZ 56/1	0.41	0.25	0.011	0.007	1.69	0.41	0.69	0.43	.	.	0.66	.	.	0.19	.
1	BS H-19	0.404	0.318	0.014	0.011	0.29	0.055	0.114	4.27	<0.001	4.17	0.356	0.0190	(0.002)	2.05	4.02
1	IARM 255A	0.403	0.27	0.013	0.0012	0.93	0.049	0.083	4.84	0.01	0.009	1.33	0.0067	0.002	0.43	0.007
1	IMZ 51/1	0.40	1.53	0.023	(0.009)	0.29	0.45	0.15	0.62	.	.	1.50	.	.	(0.013)	.
1	IMZ 58/1	0.40	1.81	0.026	0.012	0.35	0.31	1.44	0.20	.	.	0.21	.	.	0.079	.
1	ECRM 276-2D	0.399	0.365	0.0093	0.0189	1.034	0.183	0.203	4.975	.	.	1.134	0.0116	.	0.296	.
2	BS 34D	0.395	0.38	0.017	0.005	1.06	0.049	0.10	5.15	.	0.031	1.24	.	.	0.94	0.10
1	BS H-13A	0.391	0.445	0.0187	(0.003)	1.13	0.083	0.139	5.11	(0.03)	0.033	1.32	0.034	(0.03)	0.92	0.100
2	CT H13	0.39	0.30	0.015	0.005	1.05	0.061	0.10	5.23	.	.	1.36	.	.	1.02	.
1	IARM 255B	0.389	0.317	0.010	(0.002)	0.91	0.073	0.062	4.82	0.032	0.0090	1.30	(0.005)	.	0.515	.
1	IARM 42C	0.382	0.40	0.022	0.0037	0.85	0.066	0.051	4.86	0.018	0.022	1.29	0.0201	0.0125	0.84	0.32
2	BS 68C	0.38	0.60	0.018	0.008	0.305	0.178	0.166	1.77	1.06	0.011	0.36	0.0045	.	0.007	.
2	BS TH12	0.372	0.40	0.020	0.005	0.92	0.064	0.16	5.02	.	0.07	1.41	.	.	0.62	1.06
1	ECRM 271-1D	0.3698	0.437	0.0120	0.00045	0.923	0.1371	0.1552	5.002	0.0234	0.0139	1.247	0.0137	0.0020	0.850	0.0054
2	BS 49	0.36	0.33	0.014	0.015	0.92	0.072	0.20	3.51	0.004	2.00	2.41	0.0186	0.003	0.62	0.31
1	IMZ 174	0.33	0.32	0.029	0.023	0.93	0.17	0.13	5.10	0.080	0.011	1.24	0.0288	(0.001)	0.98	0.021
2	BS 9-4-30	0.316	0.22	0.008	<0.002	0.06	0.088	7.25	1.00	0.004	4.46	1.01	0.0014	.	0.09	.
1	IMZ 173	0.30	0.43	0.029	0.020	1.15	0.32	0.42	5.52	0.060	(0.013)	1.50	0.0342	(0.002)	0.47	0.10
1	IARM 341A	0.298	0.226	0.0038	0.0008	0.10	0.143	7.16	0.99	0.032	4.4	1.01	0.0025	0.003	0.086	(0.01)

| # | Number | C | Mn | P | S | Si | Cu | Ni | Cr | Al | Co | Mo | N | Ti | V | W |

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units	Comment
ECRM 179-2D	.	.	.	.	.	0.00144	.	0.00013	0.00175	.	.	0.00023	.	Disc 38 mm Ø x 35 mm	Ga: 0.00129
DSZU C079	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~35 mm Ø x 25 mm	
IARM 47B	.	(<0.001)	.	.	.	(0.002)	(0.0014)	(0.0003)	.	0.08	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
BS 33F	(0.003)	(0.0007)	.	94.0	.	(0.002)	0.0024	(0.0004)	(0.01)	(0.004)	.	.	(0.002)	Disc 38 mm Ø x ~7 - 19+ mm	17034
BS TS-7A	(0.005)	0.0021	0.0004	92.3	<0.005	<0.01	(0.005)	<0.001	<0.01	(0.004)	<0.05	.	(0.0015)	Disc 36 mm Ø x 25 mm	17034
BS 33D	.	.	.	.	.	.	.	.	.	0.005	.	.	.	Disc 41 mm Ø x 12+ mm	
IARM FeS7-18	(0.005)	.	.	(93.6)	.	(0.005)	0.0023	0.0003	(0.0016)	(0.006)	.	(0.0011)	.	Disc 31 mm Ø x 2 or 18 mm	
IARM 34C	0.0024	0.0003	(0.0004)	.	.	0.004	0.0008	(0.0003)	(0.001)	0.0058	.	.	(0.001)	Disc 31 mm Ø x 2 or 18 mm	
BS 33E	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 12+ mm	
BS 43A	(0.005)	(0.0002)	(0.0006)	[96.8]	(0.0001)	(0.0017)	(0.003)	.	(0.002)	0.011	.	.	(0.001)	Disc 41 mm Ø x ~7 or 19+ mm	17034
CT X67975	.	.	.	.	.	.	.	<0.001	.	0.003	.	.	.	Disc 30-35 mm Ø x ~16 mm	last
IARM 259A	0.006	0.0003	.	.	.	0.003	0.0014	<0.0005	.	0.004	.	.	0.001	Disc 31 mm Ø x 2 mm	
SRM 1772	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 34 mm Ø x 19 mm	
BS D-6	0.011	(0.0003)	0.0011	.	0.0002	(0.002)	(0.0008)	(0.0003)	0.0012	0.0104	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	17025
BS D-6A	0.0101	0.0004	0.0011	95.6	(0.00014)	<0.01	0.0009	(0.0006)	0.0014	(0.009)	(0.011)	.	<0.01	Disc 38 mm Ø x 19 mm	17034, last
IARM 299A	0.003	0.0003	(0.001)	.	.	0.006	(0.002)	(0.001)	(0.002)	0.0055	.	.	(0.001)	Disc 31 mm Ø x 2 or 18 mm	
IMZ 57/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
IARM 46B	(0.01)	0.0003	.	.	.	0.003	0.002	<0.002	.	0.016	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
BS TH11	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	
IMZ 53/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
IMZ 56/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
BS H-19	0.0056	.	.	.	.	0.008	0.0071	.	.	0.0056	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	17025
IARM 255A	(0.002)	0.0004	(0.0004)	.	.	0.004	0.0011	<0.001	.	0.006	.	.	<0.005	Disc 31 mm Ø x 2 mm	
IMZ 51/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
IMZ 58/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
ECRM 276-2D	.	.	.	.	.	.	.	.	.	0.0133	.	.	.	Disc 38 mm Ø x 25 or 30 mm	
BS 34D	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 mm	last
BS H-13A	0.0050	(0.0007)	(0.0006)	90.2	(0.0002)	0.0052	(0.016)	(0.0004)	(0.002)	(0.005)	.	.	(0.002)	Disc 38 mm Ø x ~7 or 19+ mm	17034
CT H13	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	
IARM 255B	.	.	.	.	.	(0.006)	.	.	.	(0.006)	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
IARM 42C	(0.01)	0.0011	(0.0005)	.	.	(0.004)	0.003	0.0007	(0.004)	(0.006)	(0.004)	(0.008)	(0.002)	Disc 31 mm Ø x 2 or 18 mm	
BS 68C	(0.004)	.	(0.0002)	.	.	.	(0.001)	.	.	0.008	.	.	.	Disc 37 mm Ø x ~7 or 19+ mm	
BS TH12	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x ~7 mm	last
ECRM 271-1D	0.0057	.	0.0009	.	.	.	0.0020	.	.	0.0084	.	.	.	Disc 35 mm Ø x 25 mm	
BS 49	.	.	.	.	.	.	.	.	.	(0.004)	.	.	.	Disc 49 mm Ø x ~7 or 19+ mm	
IMZ 174	.	.	.	.	.	.	.	.	.	0.010	.	.	.	Disc 40 mm Ø x 40 mm	
BS 9-4-30	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x ~7 or 19+ mm	
IMZ 173	.	.	.	.	.	.	.	.	.	0.012	.	.	.	Disc 40 mm Ø x 40 mm	
IARM 341A	(0.003)	0.0005	0.0011	.	.	(0.005)	0.0008	(0.001)	(0.001)	(0.005)	.	(0.0002)	(0.003)	Disc 31 mm Ø x 2 or 18 mm	

| Number | As | B | Ca | Fe | Mg | Nb | O | Pb | Sb | Sn | Ta | Zn | Zr | Units | Comment |

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= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
1	IMZ 178	0.29	0.65	0.016	0.003	0.28	0.140	2.09	1.26	0.051	0.015	0.20	0.0160	.	0.011	0.017
2	HRT 500-100	0.235	0.146	0.0119	0.0174	0.0285	0.051	3.38	0.101	0.0349	0.050	3.23	0.0065	0.0082	(0.0051)	1.81
1	IMZ 171	0.195	0.42	0.020	0.014	0.21	0.116	0.59	11.44	0.036	0.024	1.23	0.057	(0.001)	0.26	.
1	IMZ 196	0.179	0.42	0.018	0.012	0.46	0.080	0.44	11.04	0.029	1.55	0.65	0.058	.	0.34	1.54
1	IMZ 170	0.155	0.50	0.018	0.014	0.32	0.285	0.63	8.82	0.11	(0.022)	0.88	0.065	(0.002)	0.24	(0.19)
1	IMZ 176A	0.15	0.75	0.018	0.003	0.35	0.103	3.62	0.41	(0.058)	(0.010)	0.027	0.0129	.	(0.061)	(0.015)
2	CZ CM-17A	0.142	0.524	0.0310	0.0175	0.612	0.201	0.520	9.58	0.0089	0.0329	1.116	0.0743	0.0236	0.247	0.099
1	VS LG43/1	0.132	0.44	(0.01)	(0.01)	0.57	(0.11)	0.44	7.46	.	.	0.023	.	.	0.49	.
1	IMZ 197	0.130	0.45	0.021	0.007	0.47	0.11	0.053	0.20	8.45	.	(0.011)	.	0.025	0.025	.
1	NCS HS20741	0.125	0.957	0.017	0.0045	0.431	.	.	12.91	.	.	0.41	.	.	.	.
1	VS LG42/1	0.124	0.41	(0.02)	(0.008)	0.46	(0.16)	0.37	5.08	.	.	0.52	.	.	0.020	.
1	VS LG37/1	0.121	0.444	(0.02)	(0.01)	0.360	(0.13)	0.704	10.10	.	.	0.66	.	.	0.385	.
1	IARM 35L	0.119	0.535	0.007	0.014	0.679	0.123	0.071	1.35	0.017	0.0070	0.607	0.0072	(0.0015)	0.0037	(0.004)
1	IMZ 179	0.114	0.83	0.016	0.003	0.375	0.164	9.98	0.20	0.061	0.016	0.12	0.0108	.	0.023	(0.023)
1	IMZ 175	0.099	0.25	0.016	0.0040	0.22	0.130	3.12	0.515	0.043	(0.013)	0.025	0.0099	.	0.014	(0.019)
1	IMZ 157	0.095	0.63	0.015	0.010	0.59	0.066	0.50	9.51	0.26	.	0.71	0.051	0.044	0.26	.
1	IMZ 177	0.076	0.32	0.013	0.003	0.24	0.110	8.33	0.18	0.043	(0.017)	0.022	0.0089	.	0.010	.
1	13X 14713A	0.0446	0.495	0.0203	0.0080	0.911	0.0368	0.122	7.17	0.551	0.0110	0.0266	0.0065	0.0056	0.0411	.
1	SS 422	(0.036)	(0.09)	(0.015)	(0.025)	(0.06)	.	.	.	.	.	(0.033)	.	.	(<0.02)	1.28
1	IMZ 101/2	0.033	1.97	0.010	0.007	(0.092)	0.46	2.06	0.035	0.036	.	0.010	.	.	0.30	.
1	SS 423	(0.030)	(0.07)	(0.017)	(0.027)	(0.05)	.	.	.	.	.	(0.027)	.	.	(<0.02)	2.06
1	SS 424	(0.024)	(0.09)	(0.02)	(0.024)	(0.05)	.	.	.	.	.	(0.036)	.	.	(<0.02)	3.02
2	IARM 180A	0.007	0.41	0.004	0.046	0.023	0.89	1.29	0.037	0.76	0.004	0.006	0.0096	0.002	0.76	1.48

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units	Comment
IMZ 178	.	.	.	.	.	0.105	.	.	.	0.011	.	.	.	Disc 40 mm Ø x 40 mm	
HRT 500-100	0.0052	.	.	.	.	0.0127	.	.	.	0.0055	.	.	.	Disc 37 mm Ø x 25 mm	
IMZ 171	.	.	.	.	.	.	.	.	(0.003)	0.008	.	.	.	Disc 40 mm Ø x 40 mm	
IMZ 196	.	0.065	.	.	.	0.073	.	.	.	.	.	.	.	Disc 37 mm Ø x 30 mm	
IMZ 170	.	.	.	.	.	0.087	.	.	(0.002)	0.007	.	.	.	Disc 40 mm Ø x 40 mm	
IMZ 176A	.	.	.	.	.	.	.	.	.	0.009	.	.	.	Disc 40 mm Ø x 40 mm	
CZ CM-17A	0.0105	0.0060	.	.	.	.	.	0.0177	.	0.0109	.	.	.	Disc ~37 mm Ø x ~25 mm	
VS LG43/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	
IMZ 197	.	(0.007)	.	.	.	(0.011)	.	.	.	0.015	.	.	.	Disc 37 mm Ø x 30 mm	
NCS HS20741	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 40 mm	
VS LG42/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	
VS LG37/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	
IARM 35L	0.0045	0.00044	.	.	.	(0.0026)	.	.	.	0.0088	.	.	.	Disc 31 mm Ø x 2 mm	
IMZ 179	(0.007)	.	.	.	.	(0.004)	.	.	.	0.010	.	.	.	Disc 40 mm Ø x 40 mm	
IMZ 175	.	.	.	.	.	.	.	.	.	0.011	.	.	.	Disc 40 mm Ø x 40 mm	
IMZ 157	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
IMZ 177	.	.	.	.	.	.	.	.	.	0.008	.	.	.	Disc 40 mm Ø x 40 mm	
13X 14713A	.	.	.	.	0.0016	.	.	.	.	0.0034	.	.	.	Disc ~40 mm Ø x ~15 mm	
SS 422	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
IMZ 101/2	.	(0.0005)	.	.	.	.	.	.	.	.	.	.	(0.002)	Disc 40 mm Ø x 40 mm	
SS 423	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
SS 424	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm	
IARM 180A	(0.004)	0.0004	.	.	.	(0.005)	0.0006	(0.002)	.	0.002	.	.	.	Disc 31 mm Ø x 2 mm	

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units	Comment

MARAGING STEEL AND COBALT IN STAINLESS AND HIGH ALLOY STEEL

= Class, where 1 = CRM, 2 = RM

#	Number	Co	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Mo	N	Ti	V	W
1	IMZ 521	20.25	0.015	0.039	0.0031	0.0058	0.072	0.027	8.63	0.040	.	4.84	0.0113	.	3.97	5.23
1	IMZ 522	18.72	0.0088	0.032	(0.003)	0.0043	0.048	0.019	11.47	0.022	.	6.45	0.0045	0.54	2.21	2.25
1	IMZ 520	17.66	0.011	0.070	0.0043	0.019	0.094	0.080	10.10	0.242	.	4.92	0.0105	(0.007)	4.03	4.90
1	IARM FeKovar-18	17.3	0.024	0.26	(0.004)	(0.0055)	(0.09)	0.077	29.0	0.068	.	0.062	.	.	.	(0.020)
1	BS 160B	17.24	0.022	0.27	0.0033	0.0032	0.112	0.059	29.13	0.06	(0.005)	0.047	0.0006	(0.003)	0.0039	(0.011)
1	BS 160A	17.0	0.0064	0.180	0.0007	(0.0002)	0.158	0.026	29.6	0.0138	0.088	0.0100	0.0026	0.026	0.0008	(0.0001)
1	IARM 98B	17.0	0.007	0.18	0.002	0.0007	0.17	0.028	29.4	0.012	0.07	0.010	0.0024	0.03	(0.003)	(0.02)
1	IMZ 523	14.44	0.0098	0.051	(0.004)	0.0039	0.043	0.059	15.94	0.048	.	6.67	0.0037	0.70	2.01	1.87
1	IARM 242A	13.5	0.24	0.018	0.002	0.0004	0.02	0.007	11.1	3.00	0.004	1.21	0.0003	0.009	0.01	<0.01
1	IARM FeA100-18	13.4	0.222	(0.013)	(0.004)	(<0.0010)	(0.039)	(0.010)	11.2	2.98	(0.007)	1.19	(0.0010)	(0.008)	(0.007)	(0.006)
2	CT ISO045A	13.39	0.228	0.002	0.001	0.0004	<0.010	0.006	11.38	3.12	0.004	1.18	.	0.005	.	.
1	IARM 309A	12.3	0.0059	0.018	0.004	0.0006	0.020	0.023	18.4	0.053	0.11	4.71	0.0010	1.47	0.01	0.01
1	IMZ 524	12.25	0.012	0.68	(0.004)	0.004	0.13	0.024	13.75	0.085	.	4.95	0.0038	0.85	3.02	1.84
1	DSZU C093	12.08	0.013	0.32	(0.006)	(0.007)	(0.10)	(0.12)	15.80	0.42	0.17	3.79	.	1.56	.	.
1	BS 161B	9.28	0.0031	0.010	(0.004)	0.0007	0.0107	0.010	18.56	0.034	0.073	4.87	0.0011	0.67	0.0011	0.010
1	IARM 99D	9.24	(0.006)	(0.013)	(0.004)	0.0011	(0.03)	(0.045)	18.4	(0.12)	0.117	4.8	(0.0014)	0.67	(0.037)	(0.010)
1	BS 161A	9.22	0.004	0.031	0.004	0.0007	0.032	0.22	18.40	0.12	0.14	4.82	(0.002)	0.65	0.031	(0.008)
2	CT 300	9.07	0.005	0.032	0.005	0.004	0.030	0.047	18.51	0.034	0.12	4.97	.	0.69	.	.
1	DSZU C091	8.07	0.035	0.092	(0.006)	(0.011)	(0.09)	(0.12)	18.20	0.12	0.05	4.98	.	0.81	.	.
1	IARM FeC250-21	7.92	0.0028	0.022	0.0033	0.0006	0.0091	(0.0041)	18.6	(0.0093)	0.101	4.93	0.0004	0.418	(0.0074)	(0.0069)
1	BS M250	7.9	0.0021	0.024	0.0031	(0.0005)	(0.003)	(0.003)	18.7	(0.004)	0.098	4.93	<0.005	0.422	<0.05	(0.007)
1	IARM 308A	7.80	0.003	0.019	0.004	0.0005	0.014	0.018	18.53	0.023	0.097	4.78	0.0013	0.46	0.01	0.01
1	ECRM 285-2D	7.76	0.0018	0.0168	0.0053	0.0025	0.0117	0.0094	18.07	0.0236	0.1067	4.99	0.0007	0.520	.	.
2	CT 250	7.54	0.002	0.006	0.003	0.002	0.008	0.008	18.44	0.008	0.058	4.88	.	0.41	.	.
2	DSZU C55	5.75	(0.19)	0.73	(0.042)	.	0.68	.	2.24	14.9	.	1.32	(0.11)	.	0.29	(1.17)
1	DSZU C092	5.21	0.015	0.27	(0.006)	(0.009)	(0.10)	(0.16)	20.12	0.23	(0.006)	5.50	.	(0.008)	.	.
2	DSZU C53	5.20	(0.26)	0.82	(0.036)	.	0.29	.	1.47	14.8	.	1.71	.	.	0.33	(0.59)
2	DSZU C54	5.19	(0.06)	0.60	(0.036)	.	0.56	.	1.88	18.5	.	1.47	(0.13)	.	0.47	(0.71)
2	DSZU C51	4.07	(0.16)	0.40	(0.019)	.	0.25	.	1.67	10.8	.	0.68	(0.09)	.	0.15	(0.32)

#	Number	Co	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Mo	N	Ti	V	W

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zr		Comment
IMZ 521	.	.	.	.	.	.	.	.	.	(0.002)	.	.	Disc 38 mm Ø x 20 mm	
IMZ 522	.	.	.	.	.	(0.008)	.	.	.	(0.001)	.	.	Disc 38 mm Ø x 20 mm	
IMZ 520	.	(0.001)	.	.	.	(0.008)	.	.	.	(0.002)	.	.	Disc 38 mm Ø x 20 mm	
IARM FeKovar-18	.	.	.	53.3	.	.	.	.	.	0.0021	.	.	Disc 31 mm Ø x 2 or 18 mm	
BS 160B	<0.005	0.0003	0.0004	53.0	<0.005	0.0015	0.0010	<0.005	(0.0009)	0.0020	<0.005	(0.0027)	Disc 38 mm Ø x ~7 or 19+ mm	17034
BS 160A	0.0011	0.0010	(0.0004)	52.9	0.0032	0.0014	0.0022	(0.00006)	(0.0004)	0.0024	(0.0001)	0.0048	Disc 38 mm Ø x 19 mm	17025
IARM 98B	<0.002	0.001	<0.0005	52.9	0.0040	0.002	0.0021	<0.0005	.	0.002	<0.05	<0.01	Disc 31 mm Ø x 2 mm	
IMZ 523	.	.	.	.	.	(0.008)	.	.	.	(0.001)	.	.	Disc 38 mm Ø x 20 mm	
IARM 242A	.	(0.0005)	.	.	.	0.004	0.0006	.	.	(0.001)	0.008	.	Disc 31 mm Ø x 2 mm	
IARM FeA100-18	.	.	.	.	.	(0.003)	(0.0009)	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
CT ISO045A	.	.	.	70.70	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~19 mm	
IARM 309A	(0.004)	0.0032	<0.001	.	.	0.004	0.0005	.	.	(0.001)	(0.006)	0.008	Disc 31 mm Ø x 2 mm	
IMZ 524	(0.003)	.	.	.	.	(0.007)	.	.	.	.	.	.	Disc 38 mm Ø x 20 mm	
DSZU C093	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x 17 mm	
BS 161B	.	0.0027	.	66.6	.	(0.0034)	0.0005	.	.	(0.0011)	(0.017)	(0.005)	Disc 41 mm Ø x ~7 or 19+ m	17034
IARM 99D	.	0.0026	.	.	.	(0.011)	.	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
BS 161A	(0.002)	0.0023	(0.0008)	.	.	(0.004)	(0.0004)	.	.	(0.0015)	(0.03)	(0.002)	Disc 38 mm Ø x ~12 or 19 mm	ISO 25, last
CT 300	.	0.0020	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	
DSZU C091	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x 17 mm	
IARM FeC250-21	(0.0011)	0.0029	.	Rem	.	0.0019	0.0006	.	(0.0044)	(0.0015)	(0.0128)	(0.0031)	Disc 38 mm Ø x 3 or 19 mm	
BS M250	.	0.0029	(0.003)	67.8	<0.005	<0.005	0.0005	.	<0.0005	<0.005	<0.005	0.0048	Disc 38 mm Ø x ~7 or 19+ mm	17034
IARM 308A	.	0.0029	.	.	.	0.003	0.0005	.	.	0.001	<0.01	0.01	Disc 31 mm Ø x 2 mm	
ECRM 285-2D	.	0.0009	.	.	.	.	.	.	.	.	.	0.0050	Disc 38 mm Ø x 25 or 30 mm	
CT 250	.	0.0024	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~19 mm	
DSZU C55	.	.	.	.	.	0.27	.	.	.	.	.	.	Disc 42 mm Ø x 25 mm	
DSZU C092	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x 17 mm	
DSZU C53	.	.	.	.	.	0.13	.	.	.	.	.	.	Disc 42 mm Ø x 25 mm	
DSZU C54	.	.	.	.	.	0.40	.	.	.	.	.	.	Disc 42 mm Ø x 25 mm	
DSZU C51	.	.	.	.	.	0.10	.	.	.	.	.	.	Disc 42 mm Ø x 25 mm	

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zr		Comment

MANGANESE STAINLESS STEEL

= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	Mn	C	P	S	Si	Cu	Ni	Cr	Al	Mo	N	Nb	Ti	V	W
1	IARM 295A	19.7	0.021	0.028	0.0041	0.36	0.113	1.84	18.0	(0.01)	0.97	0.62	0.018	0.0019	0.046	0.016
1	ECRM 294-1D	18.68	0.0657	0.0271	0.00031	0.283	0.0242	0.429	17.98	(0.0095)	0.0861	0.566	(0.00117)	(0.0008)	0.0694	(0.00114)
1	IARM 214A	18.3	0.018	0.033	0.002	1.00	0.36	2.33	12.36	(0.002)	0.44	0.27	0.23	0.002	0.04	0.02
1	VS RG20/1	15.77	0.064	(0.02)	(0.01)	0.81	0.265	0.673	14.35		0.089		0.175	0.093	0.166	0.007
1	VS RG22/1	13.41	0.054	(0.02)	(0.008)	0.63	0.358	3.94	13.25		0.121		0.38	0.33	0.125	0.137
2	BS 193	12.11	0.104	0.018	0.002	0.66	0.088	1.82	18.48	(0.003)	0.21	0.37	0.014	0.003	0.107	(0.007)
2	CT ISO035A	12.04	0.102	0.023	0.002	0.59	0.17	1.81	18.48	<0.004	0.28	0.33	0.004	0.001	0.058	0.002
1	13X NSC3AB	11.00	0.74	0.019	0.010	1.39	0.287	3.19	24.1	0.035	0.059	0.51	2.56	(0.009)	0.158	0.034
1	IARM 296A	10.6	0.074	0.027	0.002	0.38	0.12	1.71	11.2	(0.005)	0.60	0.23	0.043	(0.002)	0.056	(0.01)
2	BS 190	9.72	0.022	0.015	0.001	0.46	0.072	6.74	19.57	(0.004)	0.15	0.255	(0.004)	0.002	0.11	0.015
2	CT ISO129A	9.31	0.030	0.002	<0.001	0.40	0.152	6.86	19.62	0.014	0.25	0.264	0.025		0.144	0.03
1	IARM FeN40-18	9.13	0.019	0.025	0.0012	0.31	0.421	6.42	19.45		0.343	0.348	0.032		0.086	0.030
1	13X NSC6A	8.85	0.0266	0.0049	0.0055	0.523	0.0064	6.52	20.47	(0.009)	(0.002)	0.235			0.0052	
1	VS RG23/1	8.74	0.045	(0.02)	(0.004)	0.49	0.099	1.98	18.5		0.401		0.24	0.21	0.69	0.3
1	IARM 18D	8.1	0.069	0.032	0.0025	3.68	0.421	8.39	16.7	(0.006)	0.325	0.170	(0.031)	0.012	0.064	(0.026)
1	BS 181B	8.07	0.070	0.021	0.0009	3.94	0.206	8.18	16.17	0.0119	0.173	0.158	0.026	0.0051	0.044	0.016
1	13X NSC2Q	8.02	0.574		0.014	1.02	1.01	3.63	20.95	0.37	0.339	0.299	2.03		0.293	0.063
1	NM 303	7.21	0.16	0.035	0.050	0.40	0.68	1.59	12.68		0.17				0.071	
1	SRM 1297	7.11	0.066	0.038	0.0033	0.397	0.442	5.34	16.69		0.331				0.080	
1	13X NSC1Q	6.79	0.269	0.0103	(0.007)	0.93	0.438	5.10	19.46	0.034	0.240	0.087	1.48	0.004	0.540	0.104
1	VS RG21/1	6.39	0.169	(0.02)	(0.008)	1.95	0.17	7.52	15.53		0.88		0.48	0.18	1.71	(0.2)
2	BS 191	5.71	0.098	0.024	0.023	3.73	0.33	5.34	16.33	(0.002)	0.36	0.117	0.024	0.012	0.083	0.033
1	VS RG19/1	5.63	0.064	(0.02)	(0.009)	0.90	(0.2)	17.73	24.5		0.166		0.108	0.14	0.407	0.206
1	IARM FeN50-18	5.27	0.030	0.026	(0.0013)	0.24	0.28	11.90	21.0	(0.006)	2.01	0.26	0.18	(0.002)	0.121	0.023
1	13X NSA10A	5.23	0.0180	0.0206	0.0007	0.375	0.170	12.98	20.67		2.636	0.342	0.143		0.151	(0.061)
2	BS 180A	5.05	0.018	0.012	0.001	0.32	0.067	13.19	21.09	0.012	2.04	0.334	0.20	(0.002)	0.20	0.02
1	IARM 292A	5.0	0.030	0.018	0.001	0.75	0.29	1.47	21.35	0.010	0.097	0.245	0.009	0.005	0.084	0.01
1	13X 32101A	4.91	0.0325	0.0194	(0.0004)	0.777	0.295	1.476	21.12	0.0122	0.0970	0.241	0.0070		0.0830	
1	BS 180B	4.65	0.022	0.017	0.0008	0.46	0.201	11.9	21.5	(0.007)	2.20	0.315	0.131	(0.005)	0.149	0.050
2	HRT FE2017-H	4.43	0.015	0.022	0.002	0.34	0.21	15.45	20.15		3.17	0.311	0.131			
1	IARM 17D	4.15	0.041	0.026	0.0018	0.416	0.412	11.83	21.06	0.0032	1.52	0.311	0.14	0.010	0.118	0.056
1	13X NSC7B	3.55	0.397	0.019	0.0098	0.88	0.220	7.50	23.9	0.204	0.435	0.429	0.82		0.167	0.041
1	DSZU C016	3.26	0.281	0.0192	0.0174	1.16	0.054	7.47	21.9	0.007	0.52	0.010		0.72	0.036	0.014
3	CZ SL-4A	2.85	1.38	0.038	0.017	2.28	0.75	2.04	26.3	0.12	0.92		1.11	0.8	0.54	0.35
1	SRM C1151a	2.37	0.034	0.017	0.038	0.29	0.385	7.25	22.59		0.79				0.040	
1	IMZ 154	2.18	0.076	0.040	0.16	0.89	0.33	9.86	17.71	(0.16)	2.58			1.00	0.073	
1	13X NSC5C	2.06	0.524		0.024	1.18	0.84	4.42	21.6	0.24	0.472	0.265	2.31		0.102	0.050

#	Number	Mn	C	P	S	Si	Cu	Ni	Cr	Al	Mo	N	Nb	Ti	V	W

Number	As	B	Ca	Co	Fe	Mg	O	Pb	Sb	Sn	Ta	Zr	Units	Comment
IARM 295A	.	0.002	.	0.021	.	.	(0.003)	.	.	0.004	.	(0.001)	Disc 31 mm Ø x 2 or 18 mm	
ECRM 294-1D	0.0037	.	(0.00026)	0.0288	.	.	.	(0.00012)	(0.00053)	(0.0014)	.	(0.0001)	Disc 40 mm Ø x 20 mm	
IARM 214A	.	(0.001)	.	0.021	.	.	0.0026	.	.	0.008	.	.	Disc 31 mm Ø x 2 mm	
VS RG20/1	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~30 mm	
VS RG22/1	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~30 mm	
BS 193	.	0.0007	0.0020	0.028	.	.	(0.004)	.	.	0.004	.	.	Disc 32 mm Ø x ~7 or 19+ mm	
CT ISO035A	.	.	.	0.037	65.91	.	.	(<0.0001)	.	0.003	.	<0.001	Disc 30-35 mm Ø x ~19 mm	
13X NSC3AB	.	.	.	0.019	.	.	.	.	.	(0.0035)	.	.	Disc ~40 mm Ø x ~15 mm	
IARM 296A	.	(0.001)	.	0.018	.	.	(0.003)	.	.	0.007	.	.	Disc 31 mm Ø x 2 mm	
BS 190	.	0.0005	.	0.044	.	.	0.0045	.	.	0.003	.	.	Disc 38 mm Ø x ~7 or 19+ mm	
CT ISO129A	.	.	.	0.102	62.62	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	
IARM FeN40-18	.	.	.	0.122	.	.	.	.	.	0.0081	.	.	Disc ~38 mm Ø x ~3 or ~19 mm	
13X NSC6A	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 13 mm	
VS RG23/1	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~30 mm	
IARM 18D	.	(0.0011)	.	0.086	.	.	.	.	.	(0.007)	.	.	Disc 31 mm Ø x 2 mm	
BS 181B	(0.002)	(0.0008)	(0.001)	0.044	62.9	(0.0003)	0.0010	(0.0005)	(0.0007)	(0.004)	.	(0.0004)	Disc 38 mm Ø x ~7 or 19+ mm	
13X NSC2Q	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
NM 303	.	.	.	0.063	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 20 mm	
SRM 1297	.	.	.	0.127	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm	
13X NSC1Q	.	.	.	0.015	.	.	.	.	.	0.0026	.	.	Disc ~40 mm Ø x ~15 mm	
VS RG21/1	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~30 mm	
BS 191	.	(0.0006)	.	0.11	.	.	0.002	.	.	(0.006)	0.002	.	Disc 38 mm Ø x ~7 or 19+ mm	
VS RG19/1	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~30 mm	
IARM FeN50-18	.	.	.	0.081	.	.	(0.006)	.	.	(0.007)	.	.	Disc 31 mm Ø x 2 or 18 mm	17025
13X NSA10A	.	0.0031	.	0.060	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm	
BS 180A	.	(0.0023)	.	0.039	.	.	0.003	.	.	(0.002)	.	.	Disc 37 mm Ø x ~7 mm	last
IARM 292A	.	0.0011	.	0.031	.	.	0.0024	.	.	0.004	(0.006)	.	Disc 31 mm Ø x 2 mm	
13X 32101A	.	0.0014	.	0.0347	.	.	.	.	.	0.0035	(0.115)	.	Disc ~38 mm Ø x ~15 mm	
BS 180B	(0.004)	0.0011	0.0009	0.111	58.5	(0.0007)	0.0043	(0.002)	(0.0007)	0.0040	(0.003)	(0.0009)	Disc 38 mm Ø x ~7 or 19+ mm	
HRT FE2017-H	.	.	.	.	.	.	.	.	.	.	.	.	Block 30 mm x 30 mm x 10 mm	
IARM 17D	0.005	0.001	(0.002)	0.23	.	(0.0003)	0.003	(0.0002)	(0.001)	0.0044	(0.003)	(0.002)	Disc 31 mm Ø x 2 or 18 mm	
13X NSC7B	.	.	.	0.297	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
DSZU C016	.	.	0.0004	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm	
CZ SL-4A	.	0.0013	.	0.11	.	.	.	.	.	0.02	.	.	Disc ~39 mm Ø x 25 mm	
SRM C1151a	.	.	.	0.033	.	.	.	0.0039	.	.	.	.	Disc 32 mm Ø x 19 mm	
IMZ 154	.	.	.	0.105	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
13X NSC5C	.	.	.	0.093	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	

Number	As	B	Ca	Co	Fe	Mg	O	Pb	Sb	Sn	Ta	Zr	Units	Comment

SULFUR AND PHOSPHORUS IN STAINLESS AND HIGH ALLOY STEEL

= Class, where 1 = CRM, 2 = RM, and 3 = RM with no uncertainties

#	Number	S	P	C	Mn	Si	Cu	Ni	Co	Cr	Mo	N	Sn	V
1	IARM Fe416-22	0.37	0.019	0.114	0.83	0.39	0.064	0.230	0.019	12.98	0.027	0.036	0.0041	0.038
2	CT 416	0.36	0.018	0.088	0.52	0.63	0.004	0.24	0.019	13.15	0.065	0.020	0.005	0.025
1	IARM Fe303-18	0.35	0.033	0.046	1.55	0.47	0.61	8.12	0.140	17.2	0.42	0.069	(0.015)	0.072
1	BS 416	0.35	0.0237	0.116	0.64	0.232	0.154	0.371	0.0241	13.41	0.030	0.043	(0.005)	0.100
2	BS 150	0.33	0.020	0.048	1.71	0.43	0.042	0.19	0.024	18.61	1.97	0.029	(0.003)	0.054
1	SRM 1223	0.329	0.018	0.127	1.08	0.327	0.081	0.232	.	12.64	0.053	.	.	0.068
2	BS 90F	0.328	0.023	0.085	0.53	0.58	0.12	0.30	0.021	13.01	0.14	0.037	0.005	0.076
1	BS 303	0.326	0.028	0.044	1.80	0.415	0.627	8.17	0.071	17.23	0.410	0.023	0.0091	0.056
1	13X 30300A	0.312	0.0205	0.041	1.83	0.422	0.025	8.60	0.0255	17.62	0.334	0.034	.	0.091
2	CT 303	0.31	0.029	0.070	1.64	0.58	0.49	9.08	0.16	17.78	0.41	.	0.007	0.044
1	IARM 355A	0.31	0.0186	0.0274	0.47	0.435	0.083	0.427	0.047	17.81	0.337	0.0439	(0.005)	0.038
2	BS 154	0.302	0.027	0.030	0.40	1.26	0.063	0.25	0.019	17.58	0.31	0.039	(0.005)	0.046
1	13X 41600A	0.302	0.0253	0.111	0.627	0.442	0.160	0.331	0.0216	13.23	0.0499	0.0245	0.0066	0.0888
2	CZ SP-1B	0.30	0.039	0.050	1.67	0.505	0.47	8.32	0.161	17.42	0.40	0.063	0.013	0.060
2	13X 12549K	0.29	0.092	0.16	0.34	0.43	0.10	1.26	0.52	11.70	1.49	.	.	.
2	BS 153	0.280	0.018	0.026	0.41	0.53	0.052	0.140	0.017	17.38	0.30	0.021	0.002	0.045
2	BS 152	0.275	0.022	0.320	0.36	0.44	0.050	0.14	0.015	13.41	0.061	0.020	0.003	0.051
3	CZ SP-1A	0.26	0.024	0.047	1.87	0.33	0.52	8.6	0.095	17.7	0.42	.	0.01	0.058
1	IARM 352A	0.21	0.0182	0.341	1.13	0.357	0.148	0.269	(0.016)	13.11	0.38	0.029	0.0046	0.028
1	13X 43020A	0.189	0.0246	0.147	1.439	0.415	0.0687	0.517	0.0191	16.07	0.226	0.0212	.	0.0542
1	13X 12548N	0.189	0.023	0.175	0.510	0.193	0.264	1.10	0.388	12.70	1.42	0.102	0.0064	0.025
1	NCS HS41751A	0.16	0.035	0.075	1.70	0.71	0.26	8.07	0.13	17.41	0.33	0.077	.	0.068
2	13X 14775S	0.154	0.047	0.006	1.405	0.552	0.167	1.949	0.153	17.78	0.529	.	0.0007	0.0287
2	BS 155	0.145	0.014	1.00	0.35	0.40	0.035	0.13	0.019	16.64	0.46	0.032	(0.003)	0.10
1	13X 12536T	0.090	0.0449	0.146	0.374	0.546	0.0793	12.12	0.280	16.09	2.48	0.0084	0.0068	0.0513
1	IARM 253A	0.0089	0.140	0.041	1.50	0.50	0.223	9.17	0.088	17.90	0.348	0.0373	0.01	0.106
1	IARM 253B	0.011	0.13	0.051	1.61	0.46	0.44	9.11	0.145	17.64	0.59	0.031	(0.012)	0.092
1	13X 19004C	0.0135	0.074	0.075	2.01	0.35	0.0112	17.90	0.0501	22.77	3.43	.	(0.001)	0.041
1	13X 18003C	0.0245	0.0545	0.113	1.000	0.805	0.0433	10.08	0.100	19.56	0.401	0.090	.	0.0750
1	13X 17001C	0.0134	0.055	0.0769	1.543	0.215	0.0161	6.31	0.0979	14.83	0.0967	.	.	.

#	Number	S	P	C	Mn	Si	Cu	Ni	Co	Cr	Mo	N	Sn	V

Number	Al	As	B	Nb	O	Pb	Sb	Se	Ta	Ti	W	Units	Comment
IARM Fe416-22	(0.0016)	(0.003)	.	(0.004)	(0.008)	.	.	.	.	0.0015	(0.004)	disc	
CT 416	.	.	.	.	.	<0.001	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	Ag: 0.0002
IARM Fe303-18	.	0.007	(0.0012)	0.015	(0.006)	.	.	.	.	.	0.029	Disc 31 mm Ø x 2 or 18 mm	
BS 416	(0.002)	0.0039	(0.001)	(0.006)	0.0081	(0.0006)	(0.002)	.	(0.004)	0.0012	0.0034	Disc 38 mm Ø x ~7 or 19+ mm	17025
BS 150	0.002	.	.	0.003	0.012	.	.	.	.	.	0.01	Disc 35 mm Ø x ~7 or 19+ mm	
SRM 1223	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm	
BS 90F	(0.006)	.	.	0.011	0.011	.	.	.	.	.	0.032	Disc 38 mm Ø x ~7 to 19 mm last	
BS 303	0.0019	.	0.0013	0.008	0.0058	.	(0.002)	.	.	0.017	0.023	Disc 44 mm Ø x ~7 or 19+ mm	17025
13X 30300A	.	.	0.0035	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
CT 303	.	.	.	.	.	0.001	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	Ag: 0.0003
IARM 355A	0.0016	(0.004)	(0.0011)	0.0095	(0.010)	(0.0002)	.	(0.0001)	(0.001)	0.0020	(0.018)	Disc 31 mm Ø x 2 or 18 mm	
BS 154	(0.002)	.	.	0.005	0.008	.	.	.	.	.	(0.01)	Disc 38 mm Ø x ~7 or 19+ mm	
13X 41600A	(0.004)	.	.	0.0053	.	.	.	.	.	.	(0.003)	Disc ~41 mm Ø x ~15 mm	
CZ SP-1B	(0.003)	(0.003)	0.0007	(0.012)	.	.	.	.	.	(0.002)	0.032	Disc ~37 mm Ø x ~25 mm	
13X 12549K	.	.	.	0.23	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm	
BS 153	0.002	(0.004)	.	0.002	.	(0.001)	.	.	.	(0.004)	(0.002)	Disc 35 mm Ø x ~7 or 19+ mm	
BS 152	(0.002)	.	.	0.006	.	.	.	.	.	.	<0.01	Disc 41 mm Ø x ~7 or 19+ mm	
CZ SP-1A	0.004	0.006	0.0007	0.012	.	.	.	.	.	0.02	0.03	Disc ~39 mm Ø x 25 mm	
IARM 352A	(0.0025)	(0.005)	(0.0007)	(0.012)	(0.005)	.	.	(0.006)	(0.0007)	0.0015	(0.005)	Disc 31 mm Ø x 2 or 18 mm	
13X 43020A	0.0047	.	(0.0032)	0.0102	.	.	.	.	.	.	0.0108	Disc ~40 mm Ø x ~15 mm	
13X 12548N	(0.02)	(0.003)	.	0.49	.	(0.002)	0.019	.		0.0015	0.038	Disc ~40 mm Ø x ~15 mm	Batch N
NCS HS41751A	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 38 mm	
13X 14775S	0.0301	(0.002)	.	0.691	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
BS 155	(0.001)	.	.	0.002	0.0048	.	.	.	.	.	.	Disc 36 mm Ø x ~7 or 19+ mm	
13X 12536T	0.108	.	0.0214	0.060	.	.	.	.	0.104	0.444	.	Disc ~40 mm Ø x ~15 mm	
IARM 253A	0.003	.	0.0003	0.016	0.009	.	.	0.21	.	0.002	0.10	Disc 31 mm Ø x 2 mm	
IARM 253B	(0.004)	0.0052	0.0007	0.021	0.007	(0.0002)	(0.0018)	0.13	(0.003)	0.0027	(0.05)	Disc 31 mm Ø x 2 or 18 mm	
13X 19004C	0.030	.	(0.001)	0.152	.	.	.	.	0.011	.	.	Disc ~40 mm Ø x ~15 mm	
13X 18003C	0.0292	.	.	1.042	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
13X 17001C	0.0312	.	0.0085	0.546	.	.	.	.	0.0124	.	.	Disc ~40 mm Ø x ~15 mm	

Number	Al	As	B	Nb	O	Pb	Sb	Se	Ta	Ti	W	Units	Comment

CRM NICKEL BINARIES

analysis listed in mass %

~40 mm Ø x ~15 mm

Number	Ni	C	Mn	P	S	Si	Cu	Cr	Al	Co	N	Mg	Mo	Nb	Ti	W
~~14X FeNi50C~~	~~51.5~~	~~0.0245~~	~~0.057~~	~~0.0168~~	~~0.16~~	~~0.151~~	~~0.089~~	~~0.066~~	~~0.319~~	~~0.416~~	.	.	.	.	.	.
~~14X FeNi45C~~	~~45.88~~	~~0.0082~~	~~0.0222~~	~~0.026~~	~~0.0015~~	~~0.77~~	~~0.089~~	~~0.076~~	~~0.98~~	~~0.572~~	.	.	.	.	.	.
14X FeNi40C	40.1	0.012	0.031	0.0148	1.03	0.050	0.081	0.64	2.00	1.057	.	.	.	.	.	.
14X 94100A	41.00	0.0055	0.443	0.0051	0.0027	0.103	0.0628	0.0265	.	0.0208	0.0016	0.0021	0.0053	(0.01)	0.0011	0.0017
~~14X FeNi10A~~	~~10.12~~	~~0.095~~	~~0.272~~	~~0.015~~	~~0.027~~	~~0.061~~	~~0.029~~	~~0.070~~	~~0.025~~	.	~~0.0055~~	.	.	.	.	.
14X FeNi8A	8.10	0.097	0.330	0.015	0.029	0.097	0.030	0.250	0.029	.	0.0061	.	.	.	.	.
14X FeNi6A	6.08	0.100	0.330	0.0155	0.028	0.075	0.028	0.073	0.025	.	0.0055	.	.	.	.	.

STAINLESS STEEL WITH LOW NICKEL

CONTINUED ON THE NEXT PAGE

= Class, 1=CRM, 2=RM, and 3=RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Sn	Ti	V	W
2	BS 156	1.06	1.15	0.022	0.007	0.47	0.09	0.35	16.87	(<0.002)	0.047	0.50	0.041	(0.004)	0.001	0.13	0.11
1	BS 93F	1.047	0.59	0.0266	(<0.0025)	0.49	0.132	0.187	16.72	0.0052	0.021	0.46	0.051	0.0059	0.0012	0.057	0.0016
1	IARM 13D	1.040	0.697	0.0195	0.0012	0.614	0.184	0.256	16.36	(0.006)	0.0212	0.488	0.0492	0.011	0.0035	0.058	0.046
2	BS 93E	1.02	0.52	0.022	0.0010	0.90	0.12	0.35	17.33	0.009	0.048	0.50	0.0359	0.003	0.007	0.24	0.11
1	13X 44004B	1.012	0.378	0.0232	0.0018	0.440	0.0687	0.197	16.50	0.0160	0.0167	0.468	0.0308	.	(0.004)	0.0484	0.0156
1	IARM 353A	0.98	0.95	0.019	0.025	0.49	0.13	0.265	17.01	0.0018	0.032	0.50	0.027	0.0056	0.0015	0.116	0.041
1	NCS HS41752	0.97	0.46	0.023	0.0016	0.48	0.082	0.192	17.61	(0.032)	.	0.057	.	.	.	0.088	.
1	ECRM 291-1D	0.90	0.81	0.017	0.0088	0.91	0.071	0.56	17.15	.	0.0233	2.10	0.1142	.	.	0.39	.
1	VS LG40/1	0.66	0.318	(0.02)	(0.006)	0.289	(0.15)	0.271	13.67	.	.	0.039	.	.	.	0.038	.
1	VS LG39/1	0.406	0.64	(0.02)	(0.007)	0.94	(0.12)	0.42	13.11	.	.	0.136	.	.	.	0.135	.
2	DSZU C21	(0.4)	(0.1)	(0.02)	.	(0.3)	(0.2)	(1.2)	(13)	.	.	(0.1)	(0.03)	0.003	.	(0.03)	.
2	DSZU C23	(0.4)	(0.1)	(0.02)	.	(0.3)	(0.2)	(1.4)	(13)	.	.	(0.1)	(0.10)	0.010	.	(0.03)	.
2	DSZU C22	(0.4)	(0.1)	(0.02)	.	(0.2)	(0.5)	(1.5)	(13)	.	.	(0.1)	(0.04)	0.051	.	(0.03)	.
2	DSZU C24	(0.4)	(0.1)	(0.02)	.	(0.2)	(0.3)	(1.5)	(13)	.	.	(0.1)	(0.12)	0.011	.	(0.03)	.
2	HRT FE2018-H	0.37	0.73	0.026	(0.003)	0.33	0.29	0.56	16.34	0.010	.	1.04	0.0134	.	.	0.064	.
1	13X 14122A	0.356	0.480	0.0177	0.0021	0.449	0.066	0.632	15.91	(0.002)	0.0224	0.855	0.0290	0.0041	.	0.101	0.004
2	BS SS4952	0.347	0.41	0.016	0.003	0.66	0.045	0.23	13.15	0.003	0.030	0.049	0.027	0.004	0.002	0.089	(0.007)
1	IARM 154C	0.339	0.423	0.0174	0.0043	0.37	0.120	0.215	12.41	(0.0034)	0.016	0.036	0.054	0.0058	0.0015	0.043	(0.005)
2	BS SS4951	0.333	0.58	0.016	0.0012	0.62	0.033	0.15	13.55	0.002	0.013	0.009	0.0127	0.003	0.002	0.032	(0.003)
1	BS 420	0.325	0.366	0.0175	0.0008	0.73	0.054	0.152	13.41	(0.003)	0.0174	0.017	0.0150	0.0041	0.0017	0.054	(0.004)
2	BS 98	0.309	0.48	0.019	0.0014	0.72	0.098	0.21	13.35	0.003	0.020	0.034	0.0181	0.006	0.002	0.075	0.009
1	IRSID 1825	0.305	0.650	0.019	0.022	0.336	0.100	0.308	12.90	.	0.026	0.052	.	.	.	0.052	.
2	DSZU C25	(0.3)	(0.1)	(0.02)	.	(0.3)	(0.7)	(1.6)	(13)	.	.	(0.1)	(0.10)	0.095	.	(0.03)	.
2	DSZU C26	(0.3)	(0.1)	(0.02)	.	(0.3)	(0.7)	(1.6)	(13)	.	.	(0.1)	(0.025)	0.0042	.	(0.03)	.
2	DSZU C116	0.296	0.464	0.0214	0.0118	0.295	0.082	0.209	12.71	(0.006)	0.021	0.029	0.022	(0.005)	(0.002)	0.029	(0.01)
1	13X 42027A	0.294	0.356	0.0139	0.0005	0.544	0.035	0.163	15.25	0.004	0.0191	0.990	0.402	0.0026	(0.002)	0.048	0.019
1	ECRM 272-1D	0.2815	0.600	0.0156	0.0196	0.420	0.0192	0.2445	11.927	0.0046	0.0145	0.0030	0.0508	.	0.00096	0.0167	.
1	SS 469	0.279	0.598	0.015	0.020	0.421	(0.02)	0.246	11.93	.	(0.01)	.	.	.	.	(0.02)	.
1	VS LG38/1	0.255	0.73	(0.02)	(0.01)	0.81	(0.16)	0.551	11.75	.	.	0.344	.	.	.	0.190	.
1	IMZ 168	0.24	1.36	0.019	0.012	1.12	0.093	0.17	13.91	(0.004)	(0.019)	0.026	(0.057)	0.009	(0.003)	0.053	.
1	IARM Fe422-22	0.239	0.687	0.021	0.0095	0.44	0.126	0.616	12.22	0.0024	0.022	0.97	0.050	0.0035	0.0017	0.210	1.03
1	BS 422	0.232	0.640	0.0169	0.0013	0.404	0.080	0.676	11.25	0.0135	0.0293	0.896	0.050	0.0043	0.0011	0.274	0.95
1	SS 472	0.227	1.02	0.032	0.029	1.05	(0.02)	1.95	15.82	.	(0.02)	0.661	.	.	.	(0.02)	.
1	13X 42200A	0.220	0.651	0.0182	0.0012	0.314	0.136	0.738	11.41	0.0020	0.0114	1.042	0.0585	0.0052	.	0.246	1.177
2	BS 97	0.216	0.71	0.021	0.0004	0.39	0.066	0.76	11.82	0.018	0.041	1.05	0.030	(0.003)	(0.002)	0.21	0.95
1	BS 422A	0.206	0.68	0.015	0.0013	0.349	0.040	0.66	11.72	0.0063	0.014	0.96	0.066	0.0039	0.0017	0.228	1.04
1	NCS HS41749	0.21	0.39	0.023	0.012	0.56	1.15	1.52	12.27	.	.	0.158	.	.	.	0.074	.
1	13X 42000A	0.208	0.679	0.0241	0.0253	0.496	0.202	0.295	12.56	.	0.0161	0.0398	0.0273	0.0073	.	0.046	.
1	13X 14923A	0.205	0.501	0.0197	0.0031	0.330	0.0563	0.452	11.26	0.003	0.0207	0.819	0.0321	0.004	.	0.295	.
1	VS LG41/1	0.200	0.91	(0.02)	(0.008)	0.64	(0.12)	1.53	15.90	.	.	0.277	.	.	.	0.303	.

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Sn	Ti	V	W
1	KUT H6/1	0.20	0.49	0.021	0.024	0.67	0.10	0.15	18.9	.	.	.	.	.	0.10	.	(0.12)
1	NCS HS41748	0.194	0.62	0.016	0.011	0.54	0.008	0.077	12.70	.	.	0.010	.	.	.	0.048	.
2	HRT FE2015-H	0.19	0.52	0.021	0.002	0.37	0.07	0.25	12.87	.	.	0.07	0.045	.	.	0.055	.
1	BS 183B	0.181	0.344	0.018	0.0042	0.41	0.074	1.96	12.45	0.0009	0.032	0.33	0.044	0.0046	(0.0016)	0.165	3.5
2	HRT FE2010-H	0.18	0.60	0.024	0.004	0.39	0.08	1.94	15.95	.	0.023	0.13	.	.	.	0.044	0.024
1	SS 70	0.18	0.38	0.024	0.020	0.35	(0.06)	0.40	16.35	.	.	.	.	.	.	.	.
1	IARM 20C	0.18	0.30	0.018	0.007	0.35	0.060	1.93	12.15	(0.004)	0.031	0.12	0.0222	0.004	(0.003)	0.086	2.59
1	IMZ 167	0.175	1.16	0.016	0.0025	0.755	0.106	0.16	13.07	(0.018)	(0.021)	0.024	0.053	0.009	(0.002)	0.054	.
1	BS 183C	0.173	0.368	0.015	0.0040	0.427	0.060	1.87	12.72	0.0020	0.027	0.189	0.039	0.0039	(0.002)	0.109	2.83
2	BS 183A	0.172	0.35	0.016	0.0040	0.37	0.093	1.85	12.14	0.002	0.036	0.12	0.0256	0.003	0.002	0.090	2.60
1	SS 473	0.172	0.494	0.019	0.030	0.604	(0.02)	(0.06)	9.06	.	(0.01)	0.95	.	.	.	(0.02)	.
1	SS 470	0.153	0.235	0.024	0.035	0.335	(0.02)	0.369	17.68	.	(0.02)	.	.	.	.	(0.02)	.
2	DSZU C115	0.145	0.341	0.0278	0.0026	0.389	0.122	1.66	11.73	0.011	0.028	0.368	0.039	0.006	(0.0020)	0.250	1.98
1	13X 41001A	0.136	0.464	0.0142	0.0037	0.298	0.056	0.0939	12.06	(0.004)	0.0143	0.0102	0.0316	0.0051	.	0.079	.
1	NCS HS28747	0.132	0.453	0.027	0.0068	0.502	0.126	1.79	16.24	.	0.051	0.153	0.030	0.0057	(0.002)	0.075	.
1	IARM Fe410-18	0.132	0.50	0.017	0.0014	0.29	0.046	0.280	12.2	(0.003)	0.012	0.146	0.046	.	.	0.065	(0.008)
1	BS 410C	0.131	0.381	0.0206	0.0051	0.366	0.084	0.352	12.78	0.0079	0.0185	0.055	0.039	0.0023	0.0006	0.042	0.0131
2	DSZU C119	0.128	0.229	0.027	0.0068	0.51	0.069	0.244	25.38	0.017	(0.01)	0.084	0.010	(0.006)	1.02	0.052	0.046
1	BS 0021	0.128	0.420	0.021	0.008	0.354	0.040	0.100	12.00	0.008	0.015	0.016	0.029	0.003	(0.003)	0.029	0.005
1	KUT H5	0.12	0.48	0.017	(0.003)	0.70	0.22	0.20	21.8	.	.	.	.	.	0.03	.	0.10
2	CT 410	0.11	0.48	0.015	0.023	0.27	0.079	0.34	12.04	0.015	0.023	0.053	0.036	0.006	0.001	0.025	0.004
1	IMZ 156	0.101	0.84	0.031	0.008	1.11	0.071	0.64	16.96	(0.034)	(0.033)	0.035	.	.	(0.032)	0.073	.
1	SS 471	0.095	0.417	0.018	0.023	0.326	(0.02)	0.96	23.85	.	(0.02)	.	.	.	.	(0.03)	.
1	IMZ 158	0.091	1.34	0.015	0.007	2.23	0.097	0.24	25.51	1.56	.	0.025	.	.	0.12	0.078	.
2	BS 151	0.090	0.41	0.021	0.018	0.65	0.11	0.24	13.19	(0.002)	0.018	0.088	0.022	0.005	(<0.003)	0.046	0.010
1	13X 15023W	0.09	1.76	0.01	0.005	0.35	0.03	0.96	11.2	0.003	0.05	0.98	0.01	.	.	0.03	0.039
1	13X 14742A	0.084	0.714	0.0214	0.0008	0.910	0.1267	0.449	17.60	0.804	0.0186	0.0968	0.0209	0.0046	0.0051	0.0463	.
1	13X 14762A	0.082	0.662	0.0275	0.0007	1.069	0.0801	0.346	24.38	1.318	0.0293	0.0553	0.0285	0.0048	0.0058	0.0993	.
2	CZ SL-1A	0.078	0.46	0.024	0.011	1.39	0.09	0.23	13.4	0.86	0.02	0.03	0.025	0.01	0.004	0.017	0.1
1	IMZ 155	0.078	0.84	0.018	0.012	0.49	0.084	0.77	11.07	(0.20)	.	0.056	.	.	0.19	0.045	(0.095)
1	IMZ 161	0.074	0.29	0.023	0.023	0.65	0.56	0.55	12.90	.	.	1.10	.	.	.	0.33	1.05
2	DSZU C117	0.071	0.200	0.0240	0.0122	0.393	0.091	0.52	16.89	0.012	0.019	0.044	0.008	(0.005)	0.59	0.027	(0.04)
1	IARM 11D	0.070	0.400	0.023	0.004	0.83	0.085	0.60	17.35	0.015	0.024	0.075	0.021	0.006	(0.003)	0.052	0.008
2	BS 91E	0.066	0.42	0.017	0.002	0.52	0.05	0.17	16.58	(0.002)	0.02	0.035	0.032	0.004	(0.002)	0.09	0.01
2	DSZU C103	0.064	0.287	0.027	(0.006)	0.34	0.066	0.21	27.04	5.28	.	0.013	.	.	0.29	0.035	(0.004)
1	BS 430	0.064	0.706	0.0239	0.0022	0.38	0.120	0.223	16.58	0.0015	0.018	0.052	0.057	0.0084	(0.002)	0.055	(0.007)
1	KUT H7/1	0.062	0.35	0.018	0.022	0.42	0.085	0.10	9.07	.	.	.	.	.	0.21	.	0.15
1	IARM 14C	0.061	0.385	0.021	0.0015	0.63	0.19	0.364	24.9	0.0041	0.043	0.101	0.058	0.004	0.013	0.078	0.031
2	BS 94C	0.057	0.45	0.024	0.002	0.62	0.056	0.43	25.90	0.004	0.042	0.20	0.065	0.006	.	0.12	(0.03)
1	BS 0022	0.050	0.41	0.018	0.011	0.62	0.036	0.23	12.36	0.078	0.017	0.117	0.033	0.004	0.002	0.034	(0.008)
1	SRM C1296	0.038	0.256	0.024	0.013	0.66	0.056	0.373	27.90	0.035	0.026	3.43	.	.	0.23	0.134	.
1	13X 40900A	0.035	0.716	0.0032	0.0059	0.616	0.134	0.231	10.98	0.0311	0.053	0.102	0.007	0.0080	0.530	0.099	.
1	13X 41008B	0.034	0.684	0.013	0.0070	0.761	0.267	0.338	12.36	0.028	0.053	0.042	0.0088	0.0081	.	0.061	.
1	13X 40800A	0.032	0.804	0.034	0.030	0.80	0.299	0.58	12.32	0.042	0.033	0.268	0.0054	0.0028	0.84	0.034	0.005
1	13X 41008A	0.029	0.711	0.010	0.0048	0.641	0.091	0.319	12.36	0.076	0.049	0.036	0.0131	0.0077	.	0.056	.
1	SRM 1295	0.027	0.387	0.022	0.0003	0.321	0.260	0.194	13.52	(0.20)	0.020	0.023	.	(0.02)	(0.01)	0.082	(0.002)
2	DSZU C101	0.024	0.198	0.013	(0.006)	0.32	0.055	0.34	21.77	5.06	.	0.026	.	.	0.31	0.023	(0.011)
1	13X 40930A	0.0227	0.707	0.0104	0.0046	0.689	0.222	0.301	11.09	0.0362	0.0241	0.0328	0.0075	0.0069	0.434	0.0339	.
1	IMZ 300	0.020	0.78	0.032	0.0071	0.71	0.159	0.311	17.20	0.012	(0.004)	(0.010)	0.008	0.007	0.165	(0.008)	0.011
1	NCS HS20743	0.015	0.949	0.038	0.0055	0.97	.	.	11.88	0.022	.	.	0.0155	.	0.411	.	.
1	IARM Fe409-20	0.010	0.387	0.021	(0.0007)	0.52	0.0655	0.110	11.28	0.017	0.019	0.011	0.010	0.0053	0.141	0.075	0.0036

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Sn	Ti	V	W

STAINLESS STEEL WITH LOW NICKEL CONTINUED FROM THE PREVIOUS PAGE

= Class, 1=CRM, 2=RM, and 3=RM with no uncertainties

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Ta	Zn	Zr	Unit	Comment
BS 156	.	.	.	.	.	0.005	0.0045	.	.	0.142	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm	
BS 93F	0.0056	(0.0001)	0.0019	[80.2]	(0.0006)	0.0029	0.0031	(0.0002)	0.0016	.	.	.	(0.001)	Disc 38 mm Ø x ~7 or 19+ mm	17025
IARM 13D	(0.008)	0.0005	(0.0007)	.	.	0.0074	0.0031	.	(0.0027)	.	(0.004)	.	(0.0017)	Disc 31 mm Ø x 2 or 18 mm	
BS 93E	.	.	.	.	.	0.005	0.0040	.	.	.	.	.	.	Disc 41 mm Ø x ~7 mm	last
13X 44004B	.	.	.	.	.	0.008	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
IARM 353A	(0.004)	(0.0006)	(0.0003)	.	.	(0.011)	(0.005)	(0.002)	.	0.17	(0.004)	(0.005)	(0.002)	Disc 31 mm Ø x 2 or 18 mm	
NCS HS41752	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 38 mm	
ECRM 291-1D	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 36 to 41 mm Ø x 28 to 35 mm	
VS LG40/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	
VS LG39/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	
DSZU C21	0.005	(0.002)	(0.001)	.	.	.	.	0.0002	0.0011	.	.	0.0026	.	Disc 40 mm Ø x 20 mm	
DSZU C23	0.008	(0.004)	(0.002)	.	.	.	.	0.0008	0.006	.	.	0.0028	.	Disc 40 mm Ø x 20 mm	
DSZU C22	0.051	(0.03)	(0.002)	.	.	.	.	0.023	0.050	.	.	0.019	.	Disc 40 mm Ø x 20 mm	
DSZU C24	0.014	(0.007)	(0.003)	.	.	.	.	0.0017	0.010	.	.	0.0035	.	Disc 40 mm Ø x 20 mm	
HRT FE2018-H	.	(0.0004)	.	.	.	.	.	.	.	.	.	.	.	Disc 36 mm Ø x 20 mm	
13X 14122A	.	.	.	.	.	0.006	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
BS SS4952	0.002	(0.0004)	0.0019	.	.	0.004	0.005	.	.	.	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	
IARM 154C	(0.004)	0.0007	.	.	.	0.014	(0.0042)	.	(0.001)	(0.0003)	.	.	(0.0014)	Disc 31 mm Ø x 2 or 18 mm	
BS SS4951	0.002	(0.0002)	(0.0004)	.	.	0.006	0.0055	.	.	.	.	.	.	Disc 42 mm Ø x ~7, ~12, ~16, or 19+ mm	
BS 420	(0.003)	0.0002	0.0017	84.8	H:0.0001	(0.003)	0.0039	.	.	.	.	.	0.0019	Disc 38 mm Ø x ~7 or 19+ mm	17034
BS 98	(0.003)	(0.0002)	(0.0005)	.	.	0.003	0.0038	.	.	.	.	.	.	Disc 38 mm Ø x ~7 mm	last
IRSID 1825	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 30 mm	
DSZU C25	0.093	(0.03)	(0.004)	.	.	.	.	0.038	0.094	.	.	0.034	.	Disc 40 mm Ø x 20 mm	
DSZU C26	0.0077	(0.0003)	(0.0009)	.	.	.	.	0.0025	0.0019	.	.	0.0189	.	Disc 40 mm Ø x 20 mm	
DSZU C116	.	.	.	.	.	(0.01)	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm	
13X 42027A	.	.	.	.	.	0.004	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
ECRM 272-1D	0.0116	0.0018	0.00090	.	(0.0002)	0.0028	.	.	0.0007	.	.	0.0031	.	Disc 38 mm Ø x 25 or 30 mm	
SS 469	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 19 mm	
VS LG38/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	
IMZ 168	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
IARM Fe422-22	0.0039	0.0006	0.0029	Rem	.	0.013	0.0073	(0.0017)	0.0009	.	.	.	(0.0017)	Disc 38 mm Ø x 3 or 19 mm	
BS 422	0.0041	(0.0002)	0.0031	84.5	(0.0009)	0.045	0.0030	(0.00005)	(0.0007)	.	(0.0001)	.	(0.001)	Disc 38 mm Ø x ~7, 19, or 50 mm	last 17025
SS 472	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 19 mm	
13X 42200A	.	.	.	.	.	0.0203	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm	
BS 97	.	.	.	.	.	0.007	.	.	.	.	.	.	.	Disc 35 mm Ø x ~7 or 19+ mm	
NCS HS41749	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 38 mm	
BS 422A	0.0031	0.0004	0.0012	84.0	H:0.00010	(0.009)	0.0023	.	0.0008	.	.	.	0.0011	Disc 38 mm Ø x ~7 or 19+ mm	17034
13X 42000A	.	0.0013	.	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm	
13X 14923A	.	.	0.0044	.	.	0.005	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
VS LG41/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~45 mm Ø x ~28 mm	

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Ta	Zn	Zr	Unit	Comment
KUT H6/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x 18 mm	
NCS HS41748	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 38 mm	
HRT FE2015-H	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30 mm Ø x 20 mm	
BS 183B	(0.005)	(0.0007)	(0.0003)	80.4	(0.0002)	(0.0075)	(0.0054)	(0.0003)	0.0009	.	(0.004)	.	(0.0009)	Disc 38 mm Ø x ~7 or 19+ mm	17034
HRT FE2010-H	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 20 mm	
SS 70	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 44 mm Ø X 13 mm	last
IARM 20C	.	.	.	.	.	0.010	0.0068	.	.	.	.	.	.	Disc 31 mm Ø x 2 mm	
IMZ 167	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
BS 183C	0.0041	(0.0008)	0.0006	81.1	(0.0002)	0.0054	(0.005)	(0.0002)	0.0007	.	(0.003)	.	(0.0005)	Disc 38 mm Ø x ~7 or 19+ mm	17034
BS 183A	(0.002)	(<0.0005)	0.0020	.	.	0.006	0.0065	.	(0.001)	.	.	.	.	Disc 38 mm Ø x ~10 to 19 mm	last
SS 473	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 19 mm	
SS 470	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 19 mm	
DSZU C115	.	.	.	.	.	0.015	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm	
13X 41001A	.	.	0.0010	.	.	.	.	.	.	.	.	.	.	Disc ~41 mm Ø x ~15 mm	
NCS HS28747	0.0063	.	.	.	.	.	.	0.0001	.	.	.	.	.	Disc 38 mm Ø x 35 mm	
IARM Fe410-18	.	.	.	.	.	0.0021	(0.009)	.	.	.	.	.	.	Disc 31 mm Ø x 2 or 18 mm	
BS 410C	0.0029	(0.0001)	0.0022	[85.4]	(0.0003)	0.0056	0.0051	(0.0001)	(0.0002)	.	(0.001)	.	(0.0002)	Disc 38 mm Ø x ~7 or 19+ mm	17025
DSZU C119	.	.	.	.	.	(0.02)	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm	
BS 0021	(0.004	(<0.0002)	(0.0002)	.	.	(0.001)	(0.004)	.	.	.	.	.	.	Disc 40 mm Ø x ~7 or 19+ mm	ISO 25
KUT H5	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x 18 mm	
CT 410	.	.	.	.	.	0.001	.	<0.001	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	Ag: 0.0002
IMZ 156	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
SS 471	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 19 mm	
IMZ 158	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
BS 151	.	.	.	.	.	0.005	0.009	.	.	0.328	.	.	.	Disc 50 mm Ø x ~7 or 19+ mm	
13X 15023W	.	.	.	.	.	1.43	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
13X 14742A	.	.	.	.	0.0022	0.0202	.	.	.	.	.	0.0055	.	Disc ~40 mm Ø x ~15 mm	
13X 14762A	.	.	0.0025	.	0.0024	0.0277	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
CZ SL-1A	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~39 mm Ø x 25 mm	
IMZ 155	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
IMZ 161	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm	
DSZU C117	.	.	.	.	.	(0.02)	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm	
IARM 11D	(0.005)	0.0006	(0.002)	.	(0.0003)	0.009	(0.004)	(0.0005)	.	(0.001)	(0.003)	(0.004)	(0.001)	Disc 31 mm Ø x 2 or 18 mm	
BS 91E	.	.	0.0008	.	.	(0.004)	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 mm	last
DSZU C103	.	.	.	.	.	(0.002)	.	.	.	.	.	.	(0.001)	Disc 38 mm Ø x 18 mm	
BS 430	0.0037	(0.0004)	(0.0003)	81.7	(0.0002)	(0.007)	0.0075	(0.0006)	(0.001)	.	(0.001)	.	.	Disc 44 mm Ø x ~7 or 19+ mm	17034
KUT H7/1	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x 18 mm	
IARM 14C	(0.003)	0.0005	(0.001)	.	(0.0005)	0.013	(0.006)	(0.0001)	(0.002)	(0.0001)	(0.002)	(0.0003)	(0.001)	Disc 31 mm Ø x 2 or 18 mm	
BS 94C	.	(0.0005)	0.0008	.	.	0.032	0.0061	.	.	.	.	.	.	Disc 44 mm Ø x ~7 or 19+ mm	
BS 0022	0.003	0.0007	.	.	(<0.0005)	0.007	(0.002)	(0.0006)	(0.0004)	.	.	(<0.002)	(<0.003)	Disc 38 mm Ø x ~7 or 19+ mm	ISO 25
SRM C1296	.	.	.	.	.	0.20	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm	
13X 40900A	.	.	.	.	.	0.032	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
13X 41008B	.	.	.	.	.	0.019	.	.	.	.	.	.	0.047	Disc ~40 mm Ø x ~15 mm	
13X 40800A	0.004	.	.	.	.	0.020	.	.	(0.002)	.	(0.027)	.	.	Disc ~40 mm Ø x ~ 15 mm	
13X 41008A	.	.	.	.	.	0.020	.	.	.	.	.	.	0.007	Disc ~40 mm Ø x ~15 mm	
SRM 1295	(0.006)	(<0.0004)	.	.	.	(<0.0005)	.	(0.0001)	(0.003)	(<0.0001)	(<0.001)	.	.	Disc 32 mm Ø x 19 mm	
DSZU C101	.	.	.	.	.	(0.011)	.	.	.	.	.	.	(0.003)	Disc 38 mm Ø x 18 mm	
13X 40930A	.	.	.	.	.	0.051	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
IMZ 300	(0.004)	(0.0005)	.	.	.	0.36	.	.	.	.	.	.	.	Disc 38 mm Ø x 20 mm	
NCS HS20743	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 35 mm Ø x 40 mm	Als: 0.021
IARM Fe409-20	0.0026	.	.	.	.	0.0041	.	.	0.0011	.	.	0.010	.	Disc 38 mm Ø x 2 or 19 mm	

Number	As	B	Ca	Fe	Mg	Nb	O	Pb	Sb	Se	Ta	Zn	Zr	Unit	Comment

STAINLESS AND HIGH ALLOY STEEL, CHART 1 of 7

= Class, 1=CRM, 2=RM, and 3=RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W
3	CZ SP-8B	2.37	0.86	0.022	0.012	1.40	0.075	2.72	37.6	0.075	0.10	.	0.04	0.06	0.13	0.13	0.05
1	VS LG58	0.48	0.99	0.0135	0.0280	0.292	0.388	4.26	23.4	.	2.41	.	0.214	.	0.039	0.26	0.21
1	VS LG76	0.445	0.342	0.021	0.0076	0.455	0.098	13.39	13.77	.	0.263	0.031	.	.	0.020	0.041	2.38
1	VS LG74	0.373	0.962	0.024	0.0049	2.49	0.093	23.66	18.30	0.031	0.104	0.030	.	.	0.030	.	0.052
2	CZ CM-19A	0.361	0.783	0.0440	0.0182	1.588	0.986	15.27	13.12	0.222	1.023	(0.021)	0.091	0.0283	0.254	1.235	0.311
2	CZ SP-4C	0.34	1.66	0.020	0.010	1.75	0.056	37.1	22.1	0.065	0.105	(0.04)	0.022	.	0.031	0.059	(0.01)
1	VS LG79	0.313	1.28	0.017	0.0036	0.703	0.065	8.72	19.23	.	1.18	.	0.47	.	.	0.049	1.16
2	CZ SP-3C	0.30	0.43	0.026	0.011	0.84	0.185	5.31	16.42	0.041	0.26	.	(0.04)	(0.02)	(0.17)	0.19	0.12
3	CZ SP-3B	0.27	0.29	0.023	0.008	0.72	0.62	5.65	15.1	0.02	0.24	.	.	0.01	0.13	0.10	0.12
1	KUT S19	0.26	0.32	0.012	0.021	2.32	0.19	12.8	7.00	.	0.11	.	0.81	.	0.048	.	.
1	SRM C1153a	0.225	0.544	0.030	0.019	1.00	0.226	8.76	16.70	0.127	0.24	.	.	.	.	0.176	.
1	13X 41800A	0.172	0.328	0.0176	0.0006	0.316	0.104	2.05	12.30	0.0357	0.068	0.028	(0.006)	0.0040	.	0.020	.
2	CZ SP-3D	0.171	0.34	0.021	0.015	0.71	0.73	5.36	16.44	0.033	0.25	.	(0.04)	(0.04)	0.088	0.11	0.12
2	13X NSB1D	0.17	0.44	.	.	0.58	.	10.0	19.1	.	0.11	0.04	.	.	.	.	.
1	IARM Fe418-18	0.168	0.429	0.016	(0.0005)	0.32	0.22	2.00	12.4	0.029	0.104	0.031	(0.019)	(0.005)	.	0.046	2.63
1	13X 15024X	0.166	0.610	0.0284	0.0294	0.750	0.332	2.99	14.65	0.1059	0.299	0.0156	0.099	.	.	0.150	0.039
1	13X 43100A	0.166	0.378	0.0199	0.0050	0.535	0.134	2.10	16.39	0.0239	0.0768	0.075	0.006	0.004	.	0.0577	0.004
1	IARM 339A	0.16	1.71	0.004	0.009	0.64	0.021	12.9	17.0	0.007	2.79	0.0060	(0.005)	(0.002)	(0.002)	0.007	(0.0119)
1	13X 18002D	0.159	0.722	0.0245	0.0487	0.352	0.116	7.92	17.77	0.0514	0.209	0.072	1.531	.	.	0.0542	.
1	BS 431A	0.159	0.53	0.019	0.0036	0.31	0.111	2.21	15.78	0.041	0.172	0.058	0.0062	0.0047	0.0010	0.079	0.021
1	IARM 12C	0.155	0.55	0.022	0.0032	0.34	0.33	2.23	15.78	0.048	0.125	0.056	0.020	0.008	(0.002)	0.040	0.015
2	BS 92B	0.150	0.42	0.021	0.003	0.42	0.13	2.12	15.92	0.04	0.17	0.073	(0.006)	0.006	(0.002)	0.07	0.02
1	SRM 1219	0.149	0.42	0.026	0.001	0.545	0.162	2.16	15.64	.	0.164	0.078	.	.	.	0.056	.
1	BS 431	0.146	0.579	0.0232	0.0047	0.393	0.282	2.25	15.8	0.050	0.092	0.049	0.034	0.0134	0.0007	0.062	0.012
2	CZ CM-18A	0.143	1.792	0.0182	0.0119	0.903	2.393	20.44	20.59	0.097	2.282	0.0848	.	.	.	0.113	0.097
1	SS 468/1	0.143	1.70	0.014	0.020	1.41	.	8.90	17.96	0.018	.	.	.	.	.	.	.
1	DSZU C019 *	0.143	0.79	0.025	0.004	4.14	0.139	11.02	18.16	0.031	0.075	(0.010)	(0.015)	(0.013)	0.65	0.038	(0.039)
1	IARM 335A	0.138	0.85	0.016	0.0005	0.39	0.086	4.27	15.30	0.063	2.72	0.085	0.015	0.0034	(0.002)	0.094	0.008
1	VS LG32/5	0.138	0.54	0.0057	0.039	0.185	0.019	7.10	19.75	.	0.110	.	.	.	0.92	0.317	0.205
1	BS 355	0.136	0.862	0.0171	0.0003	0.374	0.173	4.18	15.43	0.053	2.73	0.081	0.0103	0.0038	0.0007	0.106	0.0069
1	13X 14215L	0.136	1.110	0.0050	0.0068	0.596	0.0110	15.86	22.89	0.0057	0.0048	.	0.0196	.	.	0.0480	3.02
1	IARM 289A	0.126	1.67	0.006	0.0019	0.58	0.016	7.12	17.0	0.054	(0.005)	0.0032	0.008	(0.002)	0.028	0.01	0.01
1	DSZU C018	0.125	1.09	0.0268	0.0099	0.53	0.163	9.33	17.54	.	0.189	0.009	.	.	0.54	0.048	0.066
1	IARM 241D	0.125	1.94	(0.003)	0.0023	1.00	0.242	8.98	18.12	0.022	(0.02)	(0.008)	0.028	(0.0022)	0.018	0.031	(0.012)
1	13X NSBG	0.121	0.632	.	.	0.471	.	9.26	15.22	.	0.630	0.198	.	.	.	.	.
1	13X 14212S	0.119	0.166	0.032	0.0386	2.47	0.611	8.81	21.64	0.1090	0.520	0.0055	0.550	.	.	0.1175	3.68
2	13X PH7F	0.118	1.487	0.028	0.0057	1.402	0.77	5.41	13.16	0.049	2.52	0.044	0.241	.	0.0196	0.043	.
1	ECRM 296-1D	0.1166	0.676	0.0178	0.0026	0.242	0.1498	2.790	11.82	0.0218	1.700	0.0214	.	0.0131	.	0.363	.
1	13X 15035U	0.115	0.674	0.0415	0.0456	0.636	0.204	2.38	14.00	0.199	0.399	0.0584	0.500	.	.	0.160	0.048
1	13X 64152A	0.114	0.666	0.0123	0.0020	0.224	0.0622	2.50	11.34	0.0185	1.567	0.0339	.	0.0053	.	0.275	.

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W

Number	Al	As	B	Ca	Fe	Mg	O	Pb	Sb	Ta	Zr	Units	Comment
CZ SP-8B	0.13	0.05	0.03	.	.	.	.	.	.	.	.	~39 mm Ø x 25 mm	
VS LG58	.	.	.	.	.	.	.	.	.	.	.	~47 mm Ø x ~30 mm	
VS LG76	0.034	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
VS LG74	0.035	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
CZ CM-19A	0.0788	.	(0.091)	(0.0036)	.	.	.	.	.	.	.	~37 mm Ø x ~25 mm	
CZ SP-4C	0.011	.	.	.	(36.6)	.	.	.	.	.	.	~39 mm Ø x 25 mm	
VS LG79	0.059	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
CZ SP-3C	0.095	(0.03)	1.67	.	.	.	.	.	.	.	.	~39 mm Ø x 25 mm	
CZ SP-3B	0.08	.	0.88	.	.	.	.	.	.	.	.	~39 mm Ø x 25 mm	
KUT S19	.	.	.	.	[76.1]	.	.	.	.	.	.	30-35 mm Ø x 18 mm	
SRM C1153a	.	.	.	.	.	.	.	0.006	.	.	.	32 mm Ø x 19 mm	
13X 41800A	(0.003)	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~15 mm	
CZ SP-3D	0.037	(0.03)	2.45	.	.	.	.	.	.	.	.	~39 mm Ø x 25 mm	
13X NSB1D	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
IARM Fe418-18	(0.004)	.	.	.	.	.	(0.004)	.	.	.	.	31 mm Ø x 2 or 18 mm	
13X 15024X	0.0049	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
13X 43100A	.	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~15 mm	
IARM 339A	0.004	(0.001)	0.0006	0.0014	.	(0.0001)	0.016	(0.002)	.	(0.005)	(0.003)	31 mm Ø x 2 mm	
13X 18002D	0.0617	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
BS 431A	(0.0012)	0.0033	0.0002	(0.0003)	80.5	(0.0002)	0.0067	(0.0003)	0.0012	.	0.0012	38 mm Ø x ~7 or 19+ mm	17034
IARM 12C	(0.004)	(0.004)	0.0004	0.0007	.	(0.0002)	(0.005)	(0.0005)	.	(0.0005)	(0.001)	31 mm Ø x 2 or 18 mm	
BS 92B	(0.002)	.	(0.0002)	(0.0009)	.	.	0.0064	.	.	.	.	44 mm Ø x ~7 mm	last
SRM 1219	.	.	.	.	.	.	.	.	.	.	.	34 mm Ø x 19 mm	
BS 431	0.0019	0.0038	0.0003	0.0007	80.2	(0.0002)	0.0059	.	0.0011	.	(0.001)	38 mm Ø x ~7 or 19+ mm	17025
CZ CM-18A	0.0344	.	.	.	.	.	.	.	.	.	.	~37 mm Ø x ~25 mm	
SS 468/1	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
DSZU C019 *	0.213	.	.	* Provisional Analysis		.	.	.	.	.	.	40 mm Ø x 20 mm	
IARM 335A	0.019	(0.01)	0.0007	(0.001)	.	.	0.0020	.	.	(0.01)	(0.002)	31 mm Ø x 2 or 18 mm	
VS LG32/5	0.156	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~25 mm	
BS 355	0.0192	0.0039	(0.0001)	(0.0002)	[75.9]	(0.0002)	0.0020	.	(0.0009)	(0.0001)	(0.003)	41 mm Ø x ~7 or 19+ mm	17025
13X 14215L	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
IARM 289A	0.01	.	0.0003	.	.	.	0.0104	.	.	<0.005	.	31 mm Ø x 2 mm	
DSZU C018	0.086	.	.	0.0003	.	.	.	.	.	.	.	40 mm Ø x 25 mm	
IARM 241D	0.022	(0.001)	0.0016	(0.0012)	.	(0.0005)	(0.005)	(0.0003)	.	(0.007)	(0.005)	31 mm Ø x 2 or 18 mm	
13X NSBG	.	.	.	.	.	.	.	.	.	.	.	42 mm Ø x 15 mm	
13X 14212S	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
13X PH7F	0.012	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
ECRM 296-1D	0.0275	0.0139	(0.0003)	.	.	.	.	0.00016	.	.	.	38 mm Ø x 25 or 30 mm	
13X 15035U	(0.093)	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
13X 64152A	0.0315	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~15 mm	

Number	Al	As	B	Ca	Fe	Mg	O	Pb	Sb	Ta	Zr	Units	Comment

STAINLESS AND HIGH ALLOY STEEL, CHART 2 of 7

= Class, 1=CRM, 2=RM, and 3=RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W
1	13X 17002E	0.112	0.801	0.0409	0.0250	0.486	0.1012	7.87	17.45	0.0702	0.204	0.061	0.487	.	.	0.0587	.
1	IRSID 1819	0.112	0.903	0.023	0.0112	0.616	0.064	7.10	17.31	0.117	0.110	0.0288	.	.	.	.	.
1	NCS HS28743	0.110	0.841	0.024	0.0082	0.780	0.089	18.02	23.71	0.102	0.115	0.057	0.016	0.0025	(0.003)	0.077	.
1	13X PH3N	0.110	0.39	0.0136	0.019	1.25	5.83	3.03	16.0	0.306	0.74	0.111	0.45	.	0.0193	0.246	.
1	IARM 291A	0.11	0.71	0.016	0.009	0.23	0.060	2.62	11.3	0.021	1.61	0.035	0.022	0.004	0.0011	0.29	(0.01)
1	IMZ 166A	0.108	1.99	0.019	0.005	2.51	0.025	21.93	25.53	0.030	(0.025)	0.077	.	(0.0035)	0.003	0.038	.
1	13X 12855N	0.107	0.918	0.0020	0.0063	0.863	0.340	11.79	16.29	0.155	2.96	0.0078	0.098	.	0.083	.	0.199
1	IMZ 303	0.105	1.23	0.038	0.011	0.74	0.018	8.26	19.56	0.017	.	0.0113	.	.	0.60	0.037	.
1	13X 14828A	0.104	1.52	0.0268	0.0067	2.19	0.409	11.25	19.3	0.143	0.301	0.037	0.016	0.0128	.	0.080	0.0167
1	VS LG81	0.104	0.29	0.0121	0.0014	0.231	0.088	22.5	11.51	.	1.22	.	0.004	.	2.93	0.040	0.012
1	VS LG77	0.101	0.34	0.0149	0.0021	0.44	0.116	4.32	15.67	.	0.020	0.054	0.109	.	.	0.022	0.006
1	IMZ 164	0.100	1.77	0.019	0.002	0.82	0.26	6.75	20.96	0.035	3.48	0.249	0.049	(0.003)	(0.003)	0.053	(0.025)
2	13X 17003A	0.10	0.85	0.037	0.035	0.78	0.08	11.9	11.89	0.07	0.27	.	0.34	.	.	.	.
1	13X 14219K	0.0997	0.482	0.0401	0.0456	1.504	0.138	12.66	21.46	0.0475	0.169	.	0.140	.	.	0.0188	4.17
1	VS LG73	0.098	1.26	0.019	0.0073	0.570	0.140	17.74	22.60	0.247	0.061	0.0319	.	.	0.0022	.	0.102
1	VS LG80	0.097	0.709	0.025	0.0029	2.15	0.166	19.38	24.7	.	0.086	0.064	.	.	0.015	0.032	0.029
1	KUT S20	0.097	1.50	0.011	0.025	1.80	0.44	18.2	2.06	.	3.15	.	1.22	.	(0.01)	.	.
1	BS CA304-4	0.096	0.783	0.0205	0.0070	0.887	0.143	8.77	18.26	(0.007)	0.0041	0.061	0.063	0.0024	0.0046	0.0686	0.0056
2	BS 253	0.094	0.58	0.018	<0.001	1.81	0.14	10.89	20.68	0.15	0.21	0.146	0.017	0.006	0.005	0.050	0.03
1	SS 462	0.092	0.74	0.010	0.018	0.46	.	12.53	12.37	.	.	.	.	.	.	.	.
1	IARM 234C	0.092	1.93	0.0090	(0.0027)	0.88	3.41	9.00	18.15	0.034	0.012	(0.01)	0.053	0.0017	0.026	0.055	(0.006)
1	SS 464/1	0.086	0.791	0.020	0.028	0.57	.	20.05	25.39	0.054	.	.	.	.	.	.	.
1	13X 17004B	0.084	0.497	0.018	0.039	1.23	0.0449	16.04	21.37	0.055	0.455	0.0086	0.179	.	0.034	.	.
1	NCS HS20742	0.083	1.02	0.015	0.0035	0.636	.	.	16.58	.	.	.	.	.	.	.	.
1	SS 467/1	0.082	0.788	0.018	0.019	0.52	.	9.21	18.09	.	.	.	0.99	.	.	.	.
1	IMZ 165	0.082	0.98	0.017	0.007	1.42	0.040	19.01	23.28	0.029	0.025	0.105	.	0.003	(0.002)	0.042	.
1	13X 12854M	0.081	1.84	0.038	0.028	0.89	0.205	11.38	15.64	0.344	2.00	0.0097	0.33	.	0.052	.	0.141
1	IARM Fe177PH-18	0.080	0.730	0.020	(0.0005)	0.51	0.36	7.11	17.08	0.048	0.350	0.0153	0.009	(0.006)	0.083	0.062	(0.011)
1	VS LG35/5	0.078	0.81	0.042	0.0094	1.01	0.066	8.23	18.44	.	0.39	.	.	.	0.73	0.041	0.107
2	DSZU C120	0.078	0.158	0.0138	0.0030	0.35	0.122	8.46	30.8	(0.03)	(0.03)	0.042	0.015	0.004	0.005	0.041	(0.01)
1	KUT S26	0.076	0.99	0.027	0.026	0.67	0.14	3.31	18.9	.	2.59	.	0.07	.	0.11	.	.
1	NCS HS41750	0.075	1.43	0.031	0.012	0.33	0.276	6.35	16.31	.	0.107	0.058	.	.	(0.001)	0.064	.
1	ECRM 270-1D	0.0742	0.540	0.0196	0.0007	1.517	0.1076	10.86	20.88	0.0685	0.2099	0.1417	.	(0.0035)	(0.0019)	0.0256	(0.0244)
1	BS 192	0.074	0.835	0.025	0.0005	0.387	0.412	7.11	16.44	0.104	0.430	0.0290	0.168	0.008	0.076	0.124	0.05
1	VS LG78	0.074	1.60	0.017	0.0017	0.58	0.053	35.4	14.71	.	0.061	0.0062	0.004	.	1.31	0.020	3.16
1	13X PH17700A	0.0732	0.496	0.0181	0.0008	0.551	0.146	6.98	16.88	0.0464	0.340	0.0192	0.0201	0.0055	0.051	0.0390	0.009
1	VS LG59	0.073	1.15	0.011	0.0083	0.63	0.083	35.1	15.81	.	0.094	.	0.106	.	1.12	0.273	3.08
1	NM 301	0.073	1.38	0.037	0.021	0.39	0.41	7.89	18.0	0.17	0.36	.	.	.	.	0.07	.
2	BS 83G	0.073	1.66	0.024	0.004	0.56	0.114	19.15	24.50	0.153	0.085	0.026	0.061	0.003	(0.003)	0.077	0.007

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W

Number	Al	As	B	Ca	Ce	Fe	Mg	O	Pb	Sb	Ta	Zr	Units	Comment
13X 17002E	(0.030)	.	0.0012	.	.	.	.	.	.	.	(0.012)	.	~40 mm Ø x ~15 mm	
IRSID 1819	.	.	(0.0004)	.	.	.	.	.	.	.	.	.	47 mm x 47 mm x 30 mm	
NCS HS28743	0.0056	0.0042	.	.	.	.	.	.	0.0004	.	.	.	38 mm Ø x 35 mm	
13X PH3N	0.050	.	0.0042	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
IARM 291A	(0.004)	.	0.001	.	.	.	.	0.014	.	.	(0.001)	<0.005	31 mm Ø x 2 or 18 mm	
IMZ 166A	0.036	(0.0026)	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
13X 12855N	0.048	.	0.0098	.	.	.	.	.	.	0.093	0.122	.	~40 mm Ø x ~15 mm	
IMZ 303	0.100	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 37 mm	
13X 14828A	0.008	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
VS LG81	0.409	.	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
VS LG77	.	.	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
IMZ 164	0.040	(0.005)	.	.	.	.	.	.	(0.002)	.	.	.	40 mm Ø x 40 mm	
13X 17003A	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
13X 14219K	.	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
VS LG73	.	.	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
VS LG80	0.025	.	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
KUT S20	.	.	.	.	.	[71.5]	.	.	.	.	.	.	30-35 mm Ø x 18 mm	
BS CA304-4	0.017	0.0063	0.0031	0.0075	.	70.7	0.000024	0.013	0.0008	(0.0002)	(0.002)	0.0036	~38 mm Ø x ~38mm	17034
BS 253	0.016	0.005	.	.	0.044	.	.	.	.	.	.	.	38 mm Ø x ~7 or 19+ mm	ISO 25
SS 462	.	0.007	.	.	.	.	.	.	0.0005	.	.	.	38 mm Ø x 19 mm	last
IARM 234C	0.035	(0.001)	0.0023	(0.0017)	.	.	(0.002)	(0.005)	(0.001)	.	(0.003)	(0.006)	31 mm Ø x 2 or 18 mm	
SS 464/1	.	(0.003)	.	.	.	.	.	.	0.0004	.	.	.	38 mm Ø x 19 mm	
13X 17004B	0.043	.	0.0066	.	.	.	.	.	.	.	0.057	.	~40 mm Ø x ~15 mm	
NCS HS20742	.	.	.	.	.	.	.	.	.	.	.	.	35 mm Ø x 40 mm	
SS 467/1	.	0.004	.	.	.	.	.	.	0.004	.	0.0017	.	38 mm Ø x 19 mm	
IMZ 165	0.038	(0.003)	.	.	.	.	.	.	(0.001)	.	.	.	40 mm Ø x 40 mm	
13X 12854M	.	.	0.0101	.	.	.	.	.	.	0.068	0.020	0.0146	~40 mm Ø x ~15 mm	Bi: 0.0052
IARM Fe177PH-18	1.09	.	(0.0017)	.	.	.	.	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
VS LG35/5	0.087	.	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~25 mm	
DSZU C120	(0.02)	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm	
KUT S26	.	.	.	.	.	[76.1]	.	.	.	.	.	.	30-35 mm Ø x 18 mm	
NCS HS41750	0.009	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 38 mm	
ECRM 270-1D	(0.0023)	(0.0034)	.	.	0.0487	.	(0.0009)	.	.	(0.0007)	.	(0.0002)	38 mm Ø x 25 mm	La: 0.0154
BS 192	1.17	(0.005)	(0.0003)	0.0007	.	.	.	0.0014	.	.	(0.001)	.	38 mm Ø x ~7 or 19+ mm	ISO 25
VS LG78	0.15	.	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
13X PH17700A	1.172	.	0.0033	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~15 mm	
VS LG59	0.079	.	.	.	.	.	.	.	.	.	.	.	~47 mm Ø x ~30 mm	
NM 301	.	.	.	.	.	.	.	.	.	.	.	.	35 mm Ø x 20 mm	
BS 83G	(0.004)	.	(0.001)	.	.	.	.	0.0064	.	.	.	.	38 mm Ø x ~7 or 19+ mm	

Number	Al	As	B	Ca	Ce	Fe	Mg	O	Pb	Sb	Ta	Zr	Units	Comment

STAINLESS AND HIGH ALLOY STEEL, CHART 3 of 7

= Class, 1=CRM, 2=RM, and 3=RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W
1	NM 302	0.072	1.06	0.031	0.018	0.49	0.40	10.12	16.92	0.19	2.03	.	.	.	.	0.066	.
1	VS LG72	0.072	1.32	.	0.0050	0.334	0.306	12.4	16.36	0.090	2.07	0.0073	.	.	0.57	.	0.077
1	NCS HS41747	0.071	0.807	0.015	0.0006	0.36	0.038	32.27	20.72	0.050	0.297	.	.	.	0.49	.	.
1	IARM 316A	0.070	0.61	0.023	0.0011	1.50	0.19	10.81	21.07	0.118	0.250	0.16	(0.003)	0.006	(0.002)	0.042	0.022
1	13X 12853L	0.069	1.156	0.0053	0.0062	0.994	0.092	12.31	17.13	0.0415	2.718	0.0086	0.180	.	0.0455	.	0.089
1	VS LG63	0.068	0.356	0.010	0.0050	0.285	0.024	22.15	10.13	.	1.65	.	0.113	.	2.98	0.086	0.43
3	HH 5157A	0.067	0.95	0.012	0.003	0.43	0.33	29.31	21.48	.	.	.	.	.	0.55	.	.
1	KUT S25	0.067	1.90	0.045	0.015	1.49	0.07	13.8	15.6	.	1.77	.	0.07	.	0.46	.	.
1	BS 9841	0.067	1.69	0.024	0.024	0.54	0.356	19.55	24.30	0.116	0.57	0.064	0.070	0.006	(0.002)	0.070	0.06
1	SRM 1171	0.067	1.81	(0.019)	(0.013)	0.536	0.1205	11.18	17.50	(0.097)	0.167	.	.	.	0.346	.	(0.012)
1	IARM Fe309-18	0.066	1.61	0.029	(0.002)	0.30	0.430	12.2	22.42	0.248	0.357	.	0.021	0.012	.	0.073	0.063
1	SS 465/1	0.066	1.380	0.021	0.012	0.405	0.098	9.24	17.31	0.053	0.092	.	.	.	0.40	0.102	.
1	BS 192A	0.066	0.768	0.021	<0.002	0.300	0.334	7.01	16.44	0.114	0.28	0.029	0.208	0.008	0.083	0.077	0.048
1	IMZ 152A	0.065	1.38	0.0115	0.0072	0.55	0.065	8.47	17.10	(0.006)	0.010	0.083	(0.003)	(0.001)	(0.003)	0.013	(0.004)
1	IMZ 152	0.065	1.42	0.010	0.0025	0.52	0.061	9.48	18.04	.	0.017	.	.	.	.	0.030	.
1	VS LG71	0.064	1.33	0.032	0.0072	0.602	0.204	10.40	17.63	0.188	0.161	.	.	.	0.473	.	0.048
2	CT 304	0.063	0.78	0.026	0.023	0.56	0.34	9.60	18.57	0.20	0.33	.	0.043	0.017	.	0.037	.
1	13X 31008A	0.062	1.232	0.030	0.0040	0.510	0.157	19.35	24.45	0.078	0.337	0.063	0.012	.	.	0.079	0.166
1	BS 309	0.062	1.61	0.028	0.0011	0.24	0.349	12.16	22.40	0.200	0.193	0.073	0.0090	0.0089	0.0020	0.075	(0.031)
2	BS 82E	0.062	1.61	0.027	0.001	0.58	0.26	12.49	22.38	0.12	0.31	0.072	0.062	0.006	0.003	0.064	0.041
2	CT 316	0.061	1.64	0.029	0.023	0.69	0.25	12.61	17.60	0.14	2.45	.	.	0.006	.	0.051	.
1	BS 321D	0.060	1.76	0.024	0.022	0.27	0.358	9.09	17.42	0.096	0.274	0.0083	(0.009)	0.0091	0.55	0.054	(0.03)
1	VS LG36/5	0.060	1.97	0.017	0.027	0.70	0.085	12.6	14.95	.	0.197	.	.	.	0.39	0.156	.
2	13X NSB2D	0.06	0.62	.	.	0.66	.	11.1	18.2	.	0.21	0.095	.	.	.	.	.
1	13X PH2M	0.0598	1.184	0.0201	0.0419	0.502	4.03	3.56	16.80	0.0927	1.009	0.052	0.143	.	0.049	0.1028	.
1	BS 9842	0.059	1.50	0.025	0.0016	0.99	0.147	20.02	24.19	0.237	0.111	0.037	0.026	0.005	0.003	0.075	0.011
1	IMZ 163A	0.058	1.38	0.018	0.010	0.39	0.061	4.59	22.62	(0.020)	2.40	0.221	0.13	(0.003)	(0.002)	0.029	(0.016)
1	SRM 1172	0.056	1.7	0.025	0.01	0.59	0.10	11.3	17.4	0.12	0.22	.	0.65	.	.	.	.
1	VS LG82	0.056	0.308	0.023	0.0027	0.69	2.89	27.3	23.2	.	2.95	0.0076	0.037	.	0.85	0.050	0.116
2	BS 87F	0.055	1.64	0.024	0.025	0.67	0.28	10.12	17.30	0.17	0.29	0.037	0.57	0.004	0.004	0.13	0.050
2	BS 86F	0.054	1.30	0.021	0.0011	1.22	0.23	34.99	18.74	0.098	0.24	0.035	0.19	0.004	(0.006)	0.061	(0.03)
1	IARM 24B	0.053	0.82	0.009	0.0010	0.28	0.052	35.86	0.121	0.036	0.011	0.0017	<0.01	0.0018	0.002	<0.005	<0.04
1	DSZU C017	0.053	2.03	0.040	0.0298	0.61	0.36	10.85	19.21	.	2.36	0.018	.	.	0.32	0.084	0.20
1	SS 479	0.0529	0.680	0.0029	0.0030	0.553	0.0052	24.87	19.922	(0.002)	(0.003)	0.0057	0.625	.	0.0306	0.0052	.
1	IARM Fe304H-18	0.052	1.82	0.031	0.027	0.298	0.460	8.35	18.4	0.136	0.43	0.072	(0.010)	(0.014)	.	0.075	0.027
1	BS 347C	0.051	1.67	0.022	0.022	0.677	0.110	10.08	17.27	0.072	0.27	0.039	0.58	0.0034	(0.004)	0.097	0.013
2	BS 347B	0.051	1.57	0.028	0.026	0.51	0.15	9.16	17.24	0.05	0.38	0.056	0.71	0.006	(0.002)	0.04	(0.005)
2	BS 347A	0.051	1.50	0.026	0.020	0.54	0.31	9.20	17.44	0.054	0.326	0.044	0.79	0.007	(0.002)	0.10	(0.03)

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W

Number	Al	As	B	Ca	Fe	Mg	O	Pb	Sb	Ta	Zr	Units	Comment
NM 302	.	.	.	.	.	.	.	.	.	.	.	35 mm Ø x 20 mm	
VS LG72	0.089	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
NCS HS41747	0.299	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 30 mm	
IARM 316A	0.006	0.007	(0.0003)	0.0017	.	.	0.0052	(0.0001)	.	(0.003)	.	31 mm Ø x 2 mm	Ce: 0.064
13X 12853L	0.18	.	0.0018	.	.	.	.	.	.	0.034	.	~40 mm Ø x ~15 mm	
VS LG63	0.45	.	.	.	.	.	.	.	.	.	.	~47 mm Ø x ~30 mm	
HH 5157A	0.45	.	.	.	.	.	.	.	.	.	.	44 mm Ø x 12 mm	
KUT S25	.	.	.	.	[64.7]	.	.	.	.	.	.	30-35 mm Ø x 18 mm	
BS 9841	(<0.006)	(0.003)	0.0026	(0.0002)	.	.	(0.011)	(0.001)	(0.006)	.	(0.002)	44 mm Ø x ~7 or 19+ mm	ISO 25
SRM 1171	.	.	.	.	.	.	.	.	.	.	.	31 mm Ø x 19 mm	
IARM Fe309-18	.	0.0065	.	.	.	.	.	.	0.0018	.	.	~38 mm Ø x ~3 or ~19 mm	
SS 465/1	0.026	.	0.0006	.	.	.	.	(<0.001)	.	.	.	38 mm Ø x 19 mm	
BS 192A	0.98	(0.0035)	(0.0003)	(0.0006)	.	.	(0.0006)	.	.	.	.	38 mm Ø x ~7 or 19+ mm	ISO 25
IMZ 152A	(0.004)	(0.002)	0.0022	.	.	.	.	.	.	.	.	38 mm Ø x 20 mm	
IMZ 152	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
VS LG71	0.072	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
CT 304	.	.	.	.	.	.	.	<0.001	.	.	.	30-35 mm Ø x ~16 mm	Ag: 0.0007
13X 31008A	.	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~15 mm	
BS 309	(0.0025)	0.0048	(0.0004)	0.0010	62.6	(0.0002)	0.0027	<0.005	(0.0017)	<0.05	<0.005	38 mm Ø x ~7 or 19+ mm	17034
BS 82E	0.006	.	0.0024	0.0014	.	.	.	.	.	.	.	38 mm Ø x ~7 to 19 mm	
CT 316	.	.	.	.	.	.	.	0.001	.	.	.	30-35 mm Ø x ~19 mm	Ag: 0.0005
BS 321D	0.103	0.0040	0.0012	(0.0003)	69.8	0.0007	0.0009	(0.0003)	(0.001)	.	(0.001)	44 mm Ø x ~7 or 19+ mm	17034
VS LG36/5	0.080	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~25 mm	
13X NSB2D	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
13X PH2M	0.0419	.	0.0047	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
BS 9842	0.014	(0.002)	0.0025	0.0010	.	.	(0.0044)	.	.	.	.	38 mm Ø x ~7 or 19+ mm	ISO 25
IMZ 163A	0.018	(0.0035)	.	.	.	.	.	(0.001)	.	.	.	40 mm Ø x 40 mm	last
SRM 1172	.	.	.	.	.	.	.	.	.	<0.001	.	32 mm Ø x 19 mm	
VS LG82	0.076	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
BS 87F	0.004	0.005	(0.0006)	0.0007	.	.	0.005	.	.	.	.	41 mm Ø x ~7 or 19+ mm	
BS 86F	(0.007)	(0.003)	0.0026	(0.001)	.	.	.	(0.001)	.	.	.	44 mm Ø x ~7 or 19+ mm	
IARM 24B	0.002	<0.005	(0.001)	.	62.6	.	0.003	.	.	<0.005	<0.005	31 mm Ø x 2 mm	Se: 0.19
DSZU C017	0.28	.	.	0.0031	.	.	.	.	.	.	.	40 mm Ø x 25 mm	
SS 479	(0.013)	(0.002)	<0.0005	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
IARM Fe304H-18	(0.005)	0.0076	.	.	.	.	(0.008)	.	.	.	.	31 mm Ø x 2 or 18 mm	
BS 347C	(0.003)	(0.003)	0.0018	0.0011	69.1	(0.002)	0.0053	(0.0008)	(0.002)	(0.003)	0.0028	44 mm Ø x ~7 or 19+ mm	17034
BS 347B	0.002	(0.003)	0.0036	(0.0005)	.	.	0.005	.	.	(<0.004)	.	38 mm Ø x ~7 or 19+ mm	
BS 347A	(0.002)	(0.003)	(0.0004)	(0.0002)	.	.	0.0047	.	.	(<0.004)	.	38 mm Ø x 19+ mm	

Number	Al	As	B	Ca	Fe	Mg	O	Pb	Sb	Ta	Zr	Units	Comment

STAINLESS AND HIGH ALLOY STEEL, CHART 4 of 7

= Class, 1=CRM, 2=RM, and 3=RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W
1	SS 475	0.050	0.89	0.037	0.008	0.21	1.94	5.66	14.14	0.22	1.59	.	0.22	0.015	.	.	.
1	IARM 318B	0.050	1.02	0.022	0.0006	0.41	1.63	5.71	15.9	0.100	1.57	0.032	0.086	0.004	0.014	0.115	0.087
1	ECRM 269-1D	0.0499	1.262	0.0313	0.0010	0.441	0.366	8.044	18.150	0.1116	0.397	0.0460	0.0242	0.0099	0.0006	0.0991	0.0306
1	IARM FeINVR36-22	0.0497	0.78	0.0041	0.0019	0.307	0.058	36.0	0.094	0.010	0.012	0.0021	(0.0016)	0.0042	(0.0020)	0.0013	(0.0328)
1	VS LG64	0.049	0.75	0.017	0.0032	0.76	2.88	28.3	24.7	.	2.89	.	0.048	.	0.64	0.094	0.013
1	IARM 8H	0.049	1.81	0.0250	(0.002)	0.40	0.192	9.08	17.14	0.083	0.237	0.027	0.48	(0.008)	0.0027	0.049	(0.016)
1	IARM 6i	0.049	1.76	0.0208	(0.023)	0.31	0.202	9.20	17.76	0.052	0.133	(0.013)	(0.018)	(0.0060)	0.60	0.048	(0.023)
1	ECRM 289-1D	0.0489	1.016	0.0114	0.0027	0.531	.	24.68	14.63	0.065	1.102	.	.	0.111	2.01	0.260	.
1	BS 85D	0.048	1.69	0.024	0.024	0.54	0.45	9.98	17.09	0.97	0.59	(0.02)	0.062	0.0062	0.48	0.132	(0.07)
1	IMZ 150A	0.048	1.35	0.0064	0.0095	0.59	0.090	12.75	18.89	0.125	0.12	.	0.0026	.	0.021	(0.027)	0.11
1	IARM 4F	0.047	1.17	0.0195	0.0015	0.494	0.146	20.1	24.5	0.067	0.142	0.056	0.007	(0.005)	0.0031	0.146	0.012
2	PV 112/1	0.047	1.577	0.018	0.023	0.515	0.102	11.14	17.56	.	2.03	.	.	.	0.394	.	.
1	13X 14211R	0.047	0.787	0.0093	0.008	1.73	0.336	12.64	24.48	0.034	0.395	.	0.150	.	0.206	0.039	.
1	13X 32100A	0.0463	1.52	0.0298	0.0011	0.498	0.415	9.32	17.39	0.105	0.282	0.0115	0.0191	0.0115	0.376	0.106	0.021
1	BS 188B	0.046	0.247	0.016	(0.0007)	0.266	0.120	24.81	14.32	0.274	1.30	0.0021	0.099	0.0051	2.20	0.264	0.043
1	IARM 4G	0.0454	1.36	0.027	0.0008	0.630	0.320	19.2	24.9	0.085	0.580	0.058	0.008	0.008	0.029	0.092	0.017
1	13X 14418A	0.0450	0.819	0.0265	0.0108	0.291	0.173	4.65	15.44	0.1004	0.847	0.0423	(0.009)	0.005	.	0.0539	0.013
1	BS CD4MCU	0.045	0.568	0.025	0.021	0.71	2.93	5.62	24.46	(0.03)	1.98	0.229	(0.004)	(0.03)	0.021	0.108	0.024
1	NCS HS28748	0.045	0.742	0.028	0.013	0.644	3.23	3.85	15.88	0.119	0.259	0.030	0.230	0.0063	(0.002)	0.076	.
1	IARM 6J	0.045	1.52	0.028	(0.002)	0.62	0.383	9.00	17.74	0.191	0.387	0.0109	0.010	(0.009)	0.34	0.081	.
2	BS CA304-1	0.045	1.06	0.026	0.016	0.71	0.34	8.57	18.30	0.20	0.34	0.083	0.026	0.010	0.028	0.09	0.04
1	SRM 1230	0.044	0.64	0.023	0.0007	0.43	0.14	24.2	14.8	0.15	1.18	.	.	.	2.12	0.23	.
1	IARM 4E	0.044	1.07	0.0224	0.0006	0.514	0.234	20.18	24.25	0.066	0.32	0.038	0.024	0.0060	(0.003)	0.052	0.046
1	13X PH2S143A	0.044	0.544	0.0205	0.0022	0.478	1.61	5.20	13.45	0.0475	1.325	0.024	0.222	.	.	0.087	.
1	13X 18004C	0.0430	1.57	0.0060	0.0063	1.21	0.048	12.26	21.62	0.168	0.562	0.0225	0.748	(0.0025)	0.095	0.152	0.004
3	CZ SL-3A	0.043	1.73	0.024	0.002	0.53	0.22	19.6	24.6	0.06	0.38	0.065	0.013	0.006	0.003	0.066	0.03
1	IARM 8i	0.0424	1.395	0.0352	0.0118	0.38	0.441	9.01	17.08	0.301	0.416	0.052	0.60	(0.012)	(0.008)	0.057	0.060
1	13X 14216P	0.0424	0.663	0.0048	0.0070	1.566	0.231	12.06	23.44	0.248	0.209	0.0152	0.248	.	.	0.0722	2.25
3	HH 5179A	0.042	0.87	0.012	0.003	0.38	0.26	34.13	22.20	.	.	.	.	.	0.46	.	.
1	VS LG70	0.042	0.834	0.042	0.0020	0.382	0.062	9.17	17.10	0.209	0.096	0.0134	.	.	0.305	.	0.0053
1	IARM 8G	0.042	1.468	0.0327	0.0126	0.36	0.390	9.02	17.20	0.162	0.359	0.046	0.53	0.0107	0.0024	0.062	0.032
2	HRT FE2021-H	0.041	1.19	0.021	0.002	0.34	0.17	12.7	15.6	0.044	1.11	0.088	0.57	0.005	0.004	0.59	(0.025)
1	NILAB 500HA D	0.041	1.541	0.024	0.012	0.720	0.182	11.00	16.93	0.139	2.73	0.1154	0.023	.	.	0.074	.
1	IARM Fe174PH-18	0.041	0.47	0.024	(<0.004)	0.52	3.33	4.73	15.10	0.047	0.315	0.0436	0.285	0.008	.	0.051	0.015
2	BS 186A	0.040	0.72	0.008	0.0053	0.19	0.016	35.86	0.16	0.028	0.0032	0.0026	(<0.002)	(0.002)	(<0.003)	0.0012	(0.01)
1	13X 12538J	0.04	0.78	.	.	0.64	.	6.07	23.72	.	1.53	.	.	.	.	.	.
1	NCS HS28741	0.039	1.07	0.037	0.016	0.425	0.399	8.19	18.31	0.208	0.027	0.069	.	0.0051	(0.002)	0.106	.
1	13X 33425A	0.039	0.997	0.028	0.0052	0.85	0.204	20.90	22.3	0.092	2.52	0.0106	0.047	0.0106	0.178	(0.014)	(0.006)
1	13X 14207L	0.0388	0.597	0.0061	0.0060	1.448	0.186	12.43	19.63	0.0089	0.573	0.0099	0.258	.	0.0119	0.0043	2.99

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W

Number	Al	As	B	Ca	Fe	Mg	O	Pb	Sb	Se	Ta	Zn	Zr	Units	Comment
SS 475	0.013	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
IARM 318B	(0.004)	(0.004)	0.0003	.	.	.	0.009	.	.	.	(0.004)	.	(0.003)	31 mm Ø x 2 mm	last of stock
ECRM 269-1D	.	0.0061	.	.	.	.	.	.	.	.	.	.	.	35 mm Ø x 25 mm	
IARM FeINVR36-22	0.0023	0.0029	0.0019	.	Rem	.	(0.0042)	(0.0016)	(0.0006)	0.21	(0.0023)	.	(0.0015)	38 mm Ø x 3 or 19 mm	
VS LG64	0.189	.	.	.	.	.	.	.	.	.	.	.	.	~47 mm Ø x ~30 mm	
IARM 8H	(0.005)	.	(0.0002)	.	.	.	(0.004)	.	.	.	(0.01)	.	.	31 mm Ø x 2 or 18 mm	
IARM 6i	0.084	(0.005)	0.0034	(0.0004)	.	.	0.0012	.	.	.	.	(0.003)	(0.003)	31 mm Ø x 2 mm	
ECRM 289-1D	0.199	.	0.0044	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 30 mm	
BS 85D	0.13	(0.01)	(0.001)	0.0004	[67.8]	.	(0.002)	(0.001)	(0.001)	.	(0.001)	.	(0.004)	38 mm Ø x ~7 to 19+ mm	17034
IMZ 150A	0.022	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
IARM 4F	0.015	(0.003)	(0.0012)	(0.002)	.	.	(0.004)	.	(0.001)	(0.001)	(0.007)	(0.001)	(0.002)	31 mm Ø x 2 or 18 mm	
PV 112/1	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 25 mm	
13X 14211R	0.089	.	.	.	.	.	.	.	.	.	0.0152	.	.	~40 mm Ø x ~15 mm	
13X 32100A	0.0247	.	0.0025	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~15 mm	
BS 188B	0.168	0.0045	0.0047	(0.00003)	55.8	(0.0005)	0.0006	(0.0001)	(0.0006)	.	(0.00003)	.	(0.002)	38 mm Ø x ~7 or 19+ mm	17025
IARM 4G	0.008	(0.005)	0.0032	(0.001)	.	(0.007)	(0.003)	(0.0005)	(0.001)	(0.001)	(0.008)	(0.0005)	(0.002)	31 mm Ø x 2 mm	
13X 14418A	(0.003)	.	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
BS CD4MCU	0.0063	0.0040	0.0028	(0.001)	63.2	(0.0003)	0.019	(0.0009)	.	.	.	(0.01)	(0.002)	36 mm Ø x 26 mm	17034
NCS HS28748	.	0.0047	.	.	.	.	.	0.0001	.	.	.	.	.	38 mm Ø x 35 mm	
IARM 6J	0.0195	.	0.0024	.	.	.	(0.001)	.	.	.	(0.01)	.	.	31 mm Ø x 2 mm	
BS CA304-1	0.003	(0.003)	0.0006	0.0045	.	.	0.0041	.	(0.0020)	.	.	.	.	38 mm Ø x ~5 mm	last
SRM 1230	0.24	.	0.0055	.	.	.	.	.	.	.	.	.	.	32 mm Ø x 19 mm	
IARM 4E	0.004	(0.005)	0.0011	.	.	.	0.0021	.	.	.	0.005	.	(0.001)	31 mm Ø x 2 mm	
13X PH2S143A	.	.	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
13X 18004C	0.011	.	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
CZ SL-3A	0.007	.	0.002	.	.	.	.	.	.	.	.	.	.	~39 mm Ø x 25 mm	
IARM 8i	(0.0030)	.	(0.0005)	.	.	.	(0.004)	.	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
13X 14216P	.	.	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
HH 5179A	0.30	.	.	.	.	.	.	.	.	.	.	.	.	41 mm Ø x 12 mm	
VS LG70	0.029	.	.	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
IARM 8G	0.0030	(0.007)	(0.0005)	(0.0005)	.	.	(0.003)	.	.	(0.01)	(0.004)	.	(0.002)	31 mm Ø x 2 mm	
HRT FE2021-H	0.007	0.004	0.0021	.	.	(0.0008)	.	.	0.003	.	0.004	(0.0015)	(0.0030)	50 mm Ø x 20 mm	
NILAB 500HA D	.	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 20 mm	
IARM Fe174PH-18	0.007	.	.	.	.	.	0.0035	.	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
BS 186A	(0.001)	.	.	.	.	.	.	.	.	0.229	.	.	.	38 mm Ø x ~7, ~12, or 19 mm	
13X 12538J	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm	
NCS HS28741	.	0.0035	.	.	.	.	.	0.0001	.	.	.	.	.	38 mm Ø x 35 mm	
13X 33425A	0.017	(0.0021)	.	.	.	.	.	.	(0.002)	.	.	.	.	~40 mm Ø x ~15 mm	
13X 14207L	0.0226	.	.	.	.	.	.	.	.	.	0.082	.	.	~40 mm Ø x ~15 mm	

Number	Al	As	B	Ca	Fe	Mg	O	Pb	Sb	Se	Ta	Zn	Zr	Units	Comment

STAINLESS AND HIGH ALLOY STEEL, CHART 5 of 7

= Class, 1=CRM, 2=RM, and 3=RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W
1	13X PH13800A	0.0386	0.0332	0.0064	0.0030	0.081	0.0449	8.04	12.53	0.0220	2.10	0.0041	.	0.0051	0.0122	0.0188	.
1	IARM 26D	0.038	0.224	0.013	(0.0008)	(0.05)	0.047	24.6	14.29	0.040	1.23	0.0035	(0.007)	0.0039	2.17	0.223	0.036
1	13X 41500A	0.038	0.596	0.021	0.0101	0.402	0.129	3.52	13.00	0.099	0.504	0.0504	0.040	.	0.0012	0.091	.
1	IMZ 153A	0.037	1.49	0.021	0.0073	0.73	0.102	13.57	16.45	0.015	2.61	0.107	0.034	.	0.036	0.020	.
1	ECRM 292-1D	0.0367	1.744	0.0175	0.0055	0.402	0.0391	10.09	18.00	0.0255	0.0464	0.0640	0.571	.	.	.	.
3	HH 5196A	0.036	1.05	0.011	0.002	0.45	0.24	31.46	20.66	.	.	.	.	.	1.13	.	.
2	CT 630	0.036	0.39	0.018	0.013	0.63	3.25	4.20	15.94	0.11	0.11	0.028	0.36	0.007	.	0.022	.
2	CT 450	0.036	0.39	0.014	0.006	0.29	1.49	6.36	15.20	0.16	0.80	0.028	0.67	0.008	.	0.043	.
1	SRM C2400	0.036	0.71	0.013	0.003	0.61	2.63	4.07	17.06	0.10	0.23	.	0.15	.	.	0.092	.
2	HRT FE2009-H	0.035	0.78	0.034	0.003	0.35	0.08	3.89	12.83	.	0.42	(0.0339)	.	.	.	0.043	0.058
2	BS 95A	0.035	0.58	0.026	0.004	0.46	1.50	6.42	14.72	0.081	0.73	0.0255	0.55	0.008	(0.003)	0.052	.
2	BS 9621	0.035	0.31	0.017	0.0011	0.468	3.42	4.61	14.93	0.029	0.063	0.013	0.27	0.003	(0.001)	0.096	.
2	BS 184A	0.035	0.06	0.007	0.001	0.080	0.041	8.34	12.66	0.036	2.20	0.0045	(0.006)	(0.002)	0.051	0.014	.
1	SS 462/1	0.0345	0.722	0.0053	0.0041	0.463	0.0112	12.85	11.888	.	0.0304	.	.	.	.	.	.
2	CT 20 Cb-3	0.034	0.19	0.017	0.003	0.38	3.28	33.55	19.63	0.035	2.25	.	0.86	0.003	.	0.053	.
1	ECRM 273-1D	0.0336	0.785	0.0131	0.0004	0.378	3.046	4.85	14.747	0.0391	0.2462	0.0444	0.221	0.0021	.	0.0512	.
1	13X 31400A	0.033	1.60	0.026	0.0006	2.23	0.210	18.76	24.38	0.129	0.240	0.0288	0.018	.	.	0.092	0.015
1	BS 17-4PHC	0.033	0.81	0.022	0.027	0.399	3.23	4.24	15.40	0.077	0.45	0.027	0.258	0.0100	(0.001)	0.090	0.121
2	BS 185A	0.033	0.49	0.022	0.002	0.38	3.41	4.43	14.46	0.026	0.30	0.027	0.32	0.007	(0.001)	0.048	(0.014)
1	13X PH4P	0.033	0.69	0.021	0.019	0.64	5.53	4.07	15.5	0.50	0.255	0.082	0.355	.	0.075	0.55	.
2	BS 9622	0.032	0.63	0.019	0.004	0.42	3.34	4.34	14.34	0.040	0.27	0.028	0.33	0.006	(0.001)	0.074	(0.020)
1	IARM 15C	0.032	0.760	0.019	0.0018	0.26	1.54	6.35	14.39	0.024	0.722	0.0148	0.63	0.009	(0.002)	0.041	.
1	IARM 21D	0.032	0.052	0.008	(0.0014)	0.039	0.017	8.29	12.69	0.078	2.23	0.0037	(0.005)	.	0.016	0.017	.
1	BS 9812	0.031	0.485	0.018	0.004	0.43	1.65	6.61	14.82	0.110	0.76	0.0195	0.645	0.004	(0.005)	0.088	0.025
1	13X 32180A	0.031	2.11	0.007	0.0093	0.485	0.49	10.16	18.92	0.040	0.245	0.0067	(0.0021)	0.0116	0.81	0.026	.
1	13X NSA9B	0.030	1.52	0.0237	0.0009	0.290	0.154	5.75	22.39	0.033	3.27	0.184	0.021	.	.	0.060	.
1	BS 450	0.029	0.596	0.016	0.0013	0.323	1.51	6.24	14.4	0.028	0.671	0.022	0.59	0.0046	<0.008	0.051	0.016
1	13X 30403B	0.0277	1.820	0.0321	0.0266	0.288	0.497	8.13	18.30	0.178	0.313	0.083	0.0201	0.0139	0.0013	0.0700	0.035
2	HRT FE2014-H	0.027	1.91	0.023	(0.002)	0.39	0.25	9.92	17.16	.	0.41	(0.018)	.	.	0.31	.	.
1	BS 9811	0.027	0.380	0.016	0.0010	0.36	1.63	6.55	14.87	0.055	0.744	0.0196	0.62	0.004	(0.003)	0.086	0.013
1	VS LG75	0.027	0.728	0.0046	0.0026	0.298	0.029	24.5	14.80	0.190	0.052	0.0044	.	.	1.76	.	4.14
1	SRM 1155a	0.0260	1.593	0.0271	(0.0020)	0.521	0.2431	12.471	17.803	0.225	2.188	(0.0428)	0.0082	(0.0069)	0.0039	0.0725	0.0809
3	HH 5300A	0.026	0.86	0.013	0.003	0.35	0.28	33.56	18.18	.	.	.	.	.	0.54	.	.
1	BS 2507	0.026	0.79	0.023	(0.0005)	0.32	0.222	6.94	25.3	0.040	3.75	0.273	(0.011)	0.0050	0.0028	0.064	0.074
1	13X 32900A	0.0251	1.478	0.0276	0.0269	0.556	0.354	5.57	24.91	0.0724	1.310	0.097	.	.	0.0139	0.0938	0.017
1	SRM 1158	0.025	0.468	0.004	0.005	0.194	0.039	36.03	0.062	0.008	0.010	.	.	.	.	0.001	.
1	BS 317L	0.025	1.17	0.029	0.0017	0.67	0.23	13.51	18.2	0.14	3.07	0.055	0.031	0.0049	0.0034	0.091	0.017
1	IARM 317A	0.025	1.26	0.028	0.0007	0.39	0.21	4.19	22.5	0.064	0.249	0.123	(0.004)	0.008	(0.002)	0.061	0.015
2	TL 2001D	0.0244	0.679	0.022	0.0006	0.27	0.612	7.5	25.58	0.046	3.49	0.279	0.024	.	.	0.079	0.57

| # | Number | C | Mn | P | S | Si | Cu | Ni | Cr | Co | Mo | N | Nb | Sn | Ti | V | W |

Number	Al	As	B	Ca	Fe	Mg	O	Pb	Sb	Ta	Zr	Units	Comment
13X PH13800A	1.075	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~15 mm	
IARM 26D	0.29	.	0.0063	.	.	.	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
13X 41500A	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
IMZ 153A	0.036	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 20 mm	
ECRM 292-1D	(0.002)	(0.008)	.	(0.0006)	.	.	.	.	.	(0.001)	.	38 mm Ø x 25 or 30 mm	
HH 5196A	0.31	.	.	.	.	.	.	.	.	.	.	44 mm Ø x 12 mm	
CT 630	.	.	0.0018	.	.	.	.	0.001	.	.	.	30-35 mm Ø x ~16 mm	Ag: 0.0004
CT 450	.	.	.	.	.	.	.	0.001	.	.	.	30-35 mm Ø x ~15-19 mm	Ag: 0.0013
SRM C2400	.	.	.	.	.	.	.	.	.	.	.	32 mm Ø x 19 mm	
HRT FE2009-H	.	.	.	(0.001)	.	.	.	.	.	.	.	40 mm Ø x 40 mm	
BS 95A	0.002	.	0.0010	0.0008	.	.	.	.	.	.	.	38 mm Ø x ~7 or 19+ mm	
BS 9621	0.003	.	0.0004	(0.0001)	.	.	.	.	.	(0.002)	.	38 mm Ø x ~7 or 19+ mm	
BS 184A	1.00	.	(0.0004)	(0.0003)	.	.	(0.0003)	.	.	.	.	38 mm Ø x ~7 or 19+ mm	
SS 462/1	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
CT 20 Cb-3	.	.	0.0023	.	.	.	.	0.002	.	.	.	30-35 mm Ø x ~19 mm	Ag: 0.0019
ECRM 273-1D	.	0.0030	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm	
13X 31400A	0.022	.	.	0.0024	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
BS 17-4PHC	0.0023	0.0043	0.0026	0.0007	74.8	.	0.010	(0.0001)	.	.	(0.002)	44 mm Ø x ~7 or 19+ mm	17034
BS 185A	0.002	.	0.0017	(0.0002)	.	.	(0.0021)	.	.	(0.002)	.	38 mm Ø x ~7 or 19+ mm	
13X PH4P	0.029	.	0.0031	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
BS 9622	0.002	.	0.0004	.	.	.	.	.	.	.	.	38 mm Ø x ~7 or 19+ mm	
IARM 15C	(0.005)	0.0044	(0.0006)	(0.0004)	.	.	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	31 mm Ø x 2 or 18 mm	
IARM 21D	1.03	.	.	.	.	.	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
BS 9812	(0.002)	(0.005)	(0.0003)	0.0012	.	.	(0.007)	.	.	.	.	50 mm Ø x ~7 or 19+ mm	ISO 25
13X 32180A	0.043	(0.003)	(0.0011)	.	.	.	.	.	(0.0011)	.	.	~40 mm Ø x ~ 15 mm	
13X NSA9B	.	.	0.0018	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
BS 450	(0.003)	0.0033	(0.0003)	<0.005	75.5	.	0.0027	<0.005	0.0010	.	(0.004)	44 mm Ø x ~7 or 19+ mm	17034
13X 30403B	0.0056	.	.	0.0027	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
HRT FE2014-H	.	.	.	.	.	.	.	.	.	.	.	35mm Ø x 20 mm	
BS 9811	(0.003)	(0.003)	(0.0003)	0.0014	.	.	(0.0060)	.	.	.	.	38 mm Ø x ~7 or 19+ mm	ISO 25
VS LG75	0.113	.	.	.	.	.	.	.	.	.	.	~45 mm Ø x ~28 mm	
SRM 1155a	<0.01	(0.007)	(0.002)	.	(64.71)	.	(0.003)	<0.005	.	<0.0001	<0.003	32 mm Ø x 19 mm	
HH 5300A	0.45	.	.	.	.	.	.	.	.	.	.	41 mm Ø x 12 mm	
BS 2507	(0.004)	0.0046	0.0021	(0.0003)	62.3	(0.0002)	0.0038	(0.0002)	0.0008	.	<0.01	38 mm Ø x ~7 or 19+ mm	17034
13X 32900A	0.007	.	0.0028	0.0033	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
SRM 1158	.	.	.	.	.	.	.	.	.	.	.	32 mm Ø x 19 mm	
BS 317L	0.0044	(0.003)	0.0012	0.0017	[62.8]	(0.0004)	(0.006)	(0.0002)	(0.002)	(0.002)	(0.004)	37 mm Ø x ~7 or 19+ mm	17034
IARM 317A	0.005	(0.006)	0.0019	(0.0003)	.	.	0.0032	(0.001)	.	(0.004)	.	31 mm Ø x 2 or 18 mm	
TL 2001D	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm	

| Number | Al | As | B | Ca | Fe | Mg | O | Pb | Sb | Ta | Zr | Units | Comment |

STAINLESS AND HIGH ALLOY STEEL, CHART 6 of 7

= Class, 1=CRM, 2=RM, and 3=RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W
1	IARM 162D	0.0240	1.82	0.0296	0.0271	0.570	0.52	8.15	18.31	0.074	0.573	0.097	0.0090	0.0102	0.013	0.063	0.028
1	BS 304C	0.024	1.37	0.034	0.027	0.302	0.524	8.53	18.2	0.229	0.419	0.077	(0.009)	0.0119	(0.0024)	0.083	0.043
1	NCS HS28764	0.024	0.985	0.032	0.024	0.454	0.203	11.68	18.78	0.105	3.23	.	0.145	.	.	0.059	0.046
2	PV 111/1	0.0226	1.538	0.019	0.026	0.485	0.105	8.57	18.49	.	0.173	.	.	.	.	.	.
1	IARM 153C	0.0225	1.60	0.0289	0.0288	0.349	0.442	11.10	18.22	0.251	3.00	0.086	0.015	0.010	0.004	0.058	0.043
1	ECRM 297-1D	0.0223	0.897	0.0137	0.0101	0.344	0.204	12.33	18.37	0.0413	0.290	0.0152	(0.0089)	.	0.0072	0.0535	(0.0057)
2	BS 187A	0.022	0.52	0.017	0.0025	0.26	3.10	33.06	19.75	0.32	2.06	0.0157	0.57	0.003	(0.002)	0.10	(0.02)
1	BS 186B	0.022	0.288	(0.0027)	0.0016	0.254	0.057	36.1	0.11	0.041	0.025	0.0033	(0.002)	0.0025	0.0028	(0.002)	(0.007)
1	BS 316G	0.021	1.61	0.032	0.0213	0.286	0.39	10.54	16.43	0.30	2.11	0.038	0.063	0.0100	0.0018	0.080	0.130
1	13X 17005E	0.0217	0.209	0.0040	0.0431	1.739	0.120	20.06	24.65	0.0265	0.599	0.0097	0.101	.	0.0073	.	.
2	HRT FE2004-H	0.021	1.83	0.021	0.004	0.47	1.33	24.25	19.08	0.046	4.17	.	0.046	.	0.005	0.042	.
2	CT ISO139A	0.021	1.00	0.001	0.0005	0.015	<0.001	41.69	0.004	0.066	<0.001	.	.	.	.	.	.
1	BS CD4MCU-A	0.021	0.38	(0.008)	0.0072	0.31	2.92	5.18	24.6	(0.005)	1.92	0.0112	(0.009)	0.0024	0.021	(0.006)	(0.009)
1	NCS HS28742	0.021	0.940	0.034	0.0028	0.414	0.043	8.11	18.2	0.216	0.025	0.059	.	(0.0001)	0.006	0.089	.
1	NCS HS28746	0.021	1.87	0.031	0.0009	0.510	0.340	8.24	17.19	0.191	0.069	0.011	.	0.0065	0.184	0.096	.
1	BS 2205A	0.021	1.48	0.029	0.0006	0.53	0.300	5.26	22.73	0.071	3.17	0.157	0.010	0.0058	(0.002)	0.083	(0.02)
1	BS 9941	0.021	1.78	0.027	0.024	0.33	0.424	13.68	18.48	0.178	3.24	0.036	0.015	0.007	(0.002)	0.062	0.068
1	BS 9942	0.021	1.84	0.025	0.006	0.49	0.305	13.55	18.21	0.086	3.30	0.071	0.005	0.006	(0.002)	0.072	0.032
1	IRSID 1820	0.021	1.61	(0.021)	0.0079	0.428	0.045	9.07	19.51	0.151	0.115	0.064	.	.	.	.	.
1	13X NSA8B	0.0206	0.596	0.0248	0.0007	0.285	0.589	7.48	25.49	0.0448	3.49	0.232	0.026	.	.	0.0583	0.599
1	13X NSA13A	0.020	0.761	0.0249	0.0005	0.257	0.156	6.73	25.27	0.032	3.73	0.269	0.028	0.0046	.	0.0712	0.035
2	CT ISO141A	0.0199	0.31	0.001	<0.001	0.28	<0.001	47.16	<0.001	0.030	<0.001	<0.001	.	.	0.014	0.024	.
2	TL 2003D	0.0193	1.068	0.0274	0.0169	0.5020	0.2773	9.231	18.25	0.1270	0.2871	0.0556	0.0150	.	.	0.0711	0.0150
1	13X NSA12A	0.0192	1.272	0.0267	0.0007	0.492	1.485	24.84	19.63	0.090	4.20	0.0662	0.0088	.	.	0.0660	0.047
1	BS 254	0.019	0.95	0.026	0.0009	0.312	0.612	18.47	20.2	0.08	6.07	0.210	(0.03)	0.0063	0.0019	0.062	(0.02)
1	IARM Fe2507-21	0.019	0.85	0.024	0.0005	0.36	0.125	7.12	25.2	0.039	3.76	0.27	0.022	0.0034	0.0019	0.067	0.026
1	SS 463/1	0.019	1.400	0.025	0.019	0.270	0.276	10.20	18.46	0.116	0.265	0.063	.	.	.	.	.
1	IARM 212D	0.019	1.21	0.024	0.0007	0.34	0.125	5.53	22.60	0.049	3.27	0.182	(0.009)	(0.003)	(0.002)	0.063	0.014
1	13X FV520BA	0.0181	0.655	0.0221	0.0016	0.342	1.462	5.29	13.73	0.030	1.334	0.0197	0.301	.	.	0.080	0.020
2	CT ISO136A	0.018	0.44	0.001	<0.001	0.198	<0.001	44.92	0.002	0.009	<0.001	.	.	.	.	.	.
1	NCS HS28745	0.018	1.17	0.042	0.0057	0.317	0.334	10.34	16.61	0.185	2.05	0.070	.	0.0073	(0.002)	0.070	.
1	IARM Fe415-21	0.018	0.640	0.028	0.013	0.42	0.198	3.55	11.64	0.065	0.537	0.073	0.0049	0.0104	0.0013	0.086	0.042
2	BS 17-4PHA	0.018	0.85	0.023	0.022	0.40	3.30	4.69	15.40	0.072	0.34	0.022	0.204	.	.	0.043	.
1	IARM Fe2205-18	0.018	1.18	0.023	(0.0013)	0.46	0.208	5.57	22.6	0.104	3.20	0.17	0.011	(0.006)	(0.003)	0.063	0.024
2	HRT FE2000-H	0.018	2.02	0.022	(0.003)	0.36	0.15	5.98	22.15	0.048	3.27	0.20	0.010	.	0.005	0.042	0.063
1	IARM 327A	0.018	0.54	0.018	0.0010	0.43	0.082	3.83	12.73	0.019	0.53	0.0157	0.008	0.006	0.0026	0.036	.
2	DSZU C118	0.018	1.23	0.0057	0.0098	0.142	0.344	3.45	19.69	0.093	0.337	0.028	0.116	0.026	0.117	0.109	.
1	SS 476	0.0171	1.755	0.0302	0.0234	0.323	0.302	10.17	16.88	0.162	2.04	0.0794	0.0107	0.0059	.	0.066	0.041
1	IARM Fe254SMO-21	0.017	0.892	0.022	0.0010	0.301	0.77	18.1	19.7	0.118	6.09	0.200	(0.0083)	0.0041	0.004	0.052	0.041

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W

Number	Al	As	B	Ca	Fe	Mg	O	Pb	Sb	Ta	Zr	Units	Comment
IARM 162D	(0.0026)	0.0072	0.0027	(0.003)	.	(0.0001)	0.005	.	(0.0019)	(0.005)	.	31 mm Ø x 2 mm	last
BS 304C	0.0022	0.0047	0.0005	(0.0002)	70.1	H:0.0004	0.0050	.	<0.05	Zn:<0.005	(0.002)	38 mm Ø x ~7 or 19+ mm	17034
NCS HS28764	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm	Bi: 0.013
PV 111/1	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 25 mm	
IARM 153C	(0.003)	0.0061	0.0009	(0.0026)	.	.	0.006	(0.001)	(0.002)	(0.006)	(0.004)	31 mm Ø x 2 or 18 mm	
ECRM 297-1D	0.0195	0.0040	1.146	(0.0002)	.	.	.	.	.	.	(0.0002)	40 mm Ø x 30 mm	
BS 187A	(0.009)	.	0.0022	.	.	.	0.0029	.	.	<0.002	.	41 mm Ø x ~7 mm	last
BS 186B	0.0080	0.0022	(0.0006)	(0.0007)	63.0	(0.0004)	0.0011	(0.003)	(0.0007)	(0.005)	0.0020	43 mm Ø x ~7 or 19+ mm	17034
BS 316G	(0.003)	(0.006)	0.0023	0.0008	67.9	H:0.0004	0.0034	0.0006	0.0018	.	(0.002)	38 mm Ø x ~7 or 19+ mm	17034
13X 17005E	0.049	.	0.0030	.	.	.	.	.	.	0.015	.	~40 mm Ø x ~15 mm	
HRT FE2004-H	0.005	.	0.0021	.	.	.	.	.	.	.	.	35 mm Ø x 20 mm	
CT ISO139A	.	.	.	.	57.10	.	.	.	.	.	.	30-35 mm Ø x ~16 mm	
BS CD4MCU-A	(0.009)	0.0022	(0.0008)	(0.001)	64.5	(0.0003)	0.0061	(0.002)	(0.0007)	.	(0.002)	44 mm Ø x 19+ mm	17034
NCS HS28742	.	0.0025	.	.	.	.	.	0.0001	.	.	.	38 mm Ø x 35 mm	
NCS HS28746	0.086	0.0032	.	.	.	.	.	0.0002	.	.	.	38 mm Ø x 35 mm	
BS 2205A	(0.004)	0.0072	0.0022	0.0007	66.2	(0.0001)	0.0046	.	.	.	(0.003)	38 mm Ø x ~7 or 19+ mm	17034
BS 9941	0.004	(0.010)	0.0025	(0.0003)	.	.	(0.0058)	.	.	.	.	38 mm Ø x ~7 or 19+ mm	ISO 25
BS 9942	0.004	(0.004)	0.0014	0.0014	.	.	(0.0023)	.	.	.	.	44 mm Ø x ~7 or 19+ mm	ISO 25
IRSID 1820	.	.	(0.0013)	.	.	.	.	.	.	.	.	47 mm x 47 mm x 30 mm	
13X NSA8B	.	.	0.0017	0.0011	.	.	.	.	.	.	.	~38 mm Ø x ~15 mm	
13X NSA13A	(0.007)	.	0.0030	.	.	.	.	(0.0008)	.	.	.	~40 mm Ø x ~15 mm	
CT ISO141A	0.001	.	.	.	52.12	0.0002	.	.	.	.	.	30-35 mm Ø x ~16 mm	
TL 2003D	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm	
13X NSA12A	0.0169	.	0.0020	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
BS 254	<0.01	(0.006)	0.0018	(0.0003)	52.9	(0.0002)	0.0038	<0.01	0.0014	<0.01	0.0026	38 mm Ø x ~7 or 19+ mm	17034
IARM Fe2507-21	(0.0051)	0.004	0.0024	.	Rem	.	(0.0048)	.	0.0015	(0.0013)	0.0013	38 mm Ø x 3 or 19 mm	
SS 463/1	.	.	0.0022	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
IARM 212D	(0.005)	(0.01)	0.001	(0.001)	.	.	0.0034	(0.001)	.	(0.003)	(0.004)	31 mm Ø x 2 mm	last
13X FV520BA	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
CT ISO136A	.	.	.	.	54.27	.	.	.	.	.	.	30-35 mm Ø x ~16 mm	
NCS HS28745	.	0.0055	.	.	.	.	.	0.0001	.	.	.	38 mm Ø x 35 mm	
IARM Fe415-21	0.0018	0.0036	0.0008	.	Rem	.	0.0075	.	0.0019	.	(0.0013)	38 mm Ø x 3 or 19 mm	
BS 17-4PHA	.	.	0.0016	.	.	.	.	.	.	(0.002)	.	38 mm Ø x ~7 mm	last
IARM Fe2205-18	(0.007)	.	.	.	.	.	(0.004)	.	.	.	.	31 mm Ø x 2 or 18 mm	
HRT FE2000-H	.	.	0.0013	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm	
IARM 327A	(0.003)	(0.004)	(0.001)	.	.	(0.0003)	0.0047	.	.	(0.004)	(0.002)	31 mm Ø x 2 or 18 mm	
DSZU C118	(0.004)	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm	
SS 476	.	0.0053	.	0.0028	.	.	.	.	.	.	.	44 mm Ø x 19 mm	
IARM Fe254SMO-21	0.022	0.0044	0.0009	0.0024	53.7	.	0.0025	.	0.0017	(0.0046)	(0.0017)	38 mm Ø x 3 or 19 mm	

Number	Al	As	B	Ca	Fe	Mg	O	Pb	Sb	Ta	Zr	Units	Comment

STAINLESS AND HIGH ALLOY STEEL, CHART 7 of 7

= Class, 1=CRM, 2=RM, and 3=RM with no uncertainties

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Nb	Sn	Ti	V	W
1	IARM FeZ100-18	0.017	0.52	0.026	(0.0009)	0.24	0.55	7.1	25.5	0.123	3.61	0.22	(0.005)	(0.006)	.	0.090	0.56
1	IARM 239C	0.017	0.87	0.023	(0.0010)	0.38	1.49	6.14	25.8	0.039	3.33	0.228	(0.006)	(0.003)	(0.004)	0.083	(0.05)
1	BS 179A	0.017	1.04	0.021	0.001	0.44	1.94	5.84	25.45	0.58	3.24	0.184	0.030	0.005	0.006	0.070	.
1	ECRM 295-1D	0.0166	1.758	0.0167	0.0004	0.418	1.481	24.40	19.51	0.0450	3.996	0.0615	.	0.0025	.	0.0453	.
1	BS 179C	0.0164	0.878	0.0236	0.0003	0.373	1.53	6.10	25.9	0.0386	3.34	0.236	0.009	0.0018	(0.0005)	0.080	0.056
1	BS 179B	0.0161	0.890	0.0243	0.0002	0.371	1.56	6.17	25.9	0.0394	3.34	0.239	0.008	0.0019	(0.0008)	0.079	0.053
1	VS LG57	0.016	0.52	0.011	0.0023	0.56	0.080	25.2	13.70	.	0.401	.	.	.	1.81	0.65	4.24
1	13X 34700A	0.016	1.290	0.028	(0.0006)	0.483	0.163	9.38	17.19	0.131	0.393	0.0166	0.330	.	.	0.123	.
1	ECRM 287-1D	0.016	1.48	0.027	0.0014	0.569	0.203	10.35	18.61	0.148	0.247	0.019	.	.	.	.	.
1	13X NSA11A	0.0159	0.640	0.0186	<0.001	0.275	0.187	23.89	20.18	0.0981	6.16	0.203	0.150	.	.	0.0513	0.038
1	IARM 157D	0.0154	0.626	0.016	0.0005	0.28	0.196	23.9	20.31	0.102	6.08	0.203	0.149	0.0036	0.009	0.050	0.036
3	CZ SL-2A	0.015	1.84	0.025	0.027	0.64	0.50	11.0	16.9	0.09	2.03	0.04	.	0.01	0.06	0.075	0.03
1	IARM Fe155PH-18	0.015	0.616	0.021	(0.0004)	0.430	3.35	4.79	15.13	0.024	0.129	0.0494	0.273	0.0021	.	0.055	0.019
2	TL 2002D	0.0149	1.30	0.022	0.0206	0.53	0.438	11.0	16.7	0.087	2.05	0.0341	.	.	0.0098	0.068	.
1	BS 189A	0.0147	0.639	0.019	(0.001)	0.30	0.184	23.8	20.4	0.100	6.04	0.198	(0.13)	0.0035	0.0065	0.054	0.037
1	SS 466/2	0.0141	1.311	0.0105	0.0069	0.480	0.0278	10.20	17.84	0.0184	2.776	0.0508	.	.	.	0.0346	.
1	ECRM 298-2D	0.0140	0.788	0.0210	0.0006	0.331	0.105	6.87	24.91	0.0482	3.78	0.277	0.0011	0.0029	0.0023	0.070	0.0094
1	IARM Fe316L-23	0.014	1.37	0.031	0.024	0.226	0.300	10.5	16.77	0.46	2.04	0.039	0.067	0.0063	(0.0017)	0.098	0.103
1	NILAB 501HA D	0.014	0.858	0.020	0.003	.	0.761	17.69	19.79	0.159	6.14	0.2243	0.007	.	.	0.044	.
1	KUT S22	0.014	0.34	0.009	0.008	0.61	(0.02)	28.2	1.00	.	0.82	.	.	.	0.13	.	.
1	IARM Fe904L-22	0.0133	1.14	0.020	0.0007	0.654	1.30	24.0	19.3	0.126	4.03	0.045	0.017	0.0051	0.0020	0.064	0.024
1	13X NSA7B	0.013	0.864	0.0160	0.0005	0.278	1.53	6.37	25.69	0.047	3.28	0.232	(0.009)	0.0020	.	0.080	0.133
1	IARM Fe304L-22	0.013	1.46	0.031	0.0324	0.287	0.443	8.65	18.21	0.331	0.362	0.083	0.015	0.0101	0.0021	0.081	0.066
1	IARM 239B	0.013	0.86	0.025	0.0005	0.39	1.48	5.78	25.9	0.048	3.42	0.25	0.024	(0.003)	0.002	0.099	.
1	ECRM 379-1D	0.0121	1.804	0.0166	0.0006	0.393	0.984	30.83	26.79	0.0390	3.290	0.0550	(0.0028)	0.0021	(0.0014)	0.0663	(0.0091)
1	NCS HS41753a	0.012	0.973	0.021	0.013	0.480	1.26	24.28	19.16	0.180	4.25	0.041	0.812	.	0.004	0.075	0.058
2	CT 455	0.012	0.074	0.010	0.005	0.13	2.32	8.22	11.37	.	0.027	0.002	0.28	0.004	1.18	.	.
2	CT ISO124A	0.011	0.73	0.007	0.006	0.40	0.015	48.07	0.079	0.012	0.009	.	.	.	.	<0.001	.
2	HRT FE2016-H	0.011	1.83	0.023	0.007	0.35	0.21	11.33	16.85	.	2.03	0.073	.	.	.	0.061	.
1	SS 461/1	0.0103	0.686	0.0053	0.0051	0.374	0.0091	6.124	14.727	(0.004)	0.0138	.	.	.	.	.	.
1	SS 477	0.0102	1.623	0.0209	0.00039	0.473	1.340	25.07	20.38	0.0875	4.23	0.0562	.	0.00453	.	0.0527	.
1	14X 93603A	0.0101	0.339	0.0050	0.0045	0.153	0.0460	35.79	0.024	0.0974	0.0145	0.0057	.	.	0.0011	.	.
1	13X 30600A	0.0090	0.648	0.0091	0.0007	4.23	0.0121	14.96	17.43	0.0149	0.0040	0.027	(0.004)	.	.	0.0206	.
2	BS 96A	0.009	0.04	0.007	0.004	0.06	2.07	8.38	11.62	0.03	0.021	.	0.26	.	1.18	0.07	.
1	JK 27B	0.0089	1.510	0.0298	0.0207	0.401	0.265	12.56	17.36	0.142	2.510	0.0630	.	0.0068	.	0.057	0.031
2	BS SS1962	0.008	0.06	0.006	0.0025	0.06	2.22	8.32	11.42	(0.015)	0.008	0.0025	0.27	0.004	1.11	0.071	(<0.02)
1	IARM 354A	0.0076	(0.012)	(0.0029)	(0.0019)	(0.04)	(0.018)	11.05	11.61	0.022	0.95	0.0018	(0.02)	(0.002)	1.56	(0.02)	(0.02)
1	13X 45500A	0.0041	0.0263	0.0049	0.0020	0.059	2.20	8.36	11.39	0.0152	0.0185	0.0030	0.250	0.0048	1.187	0.0689	.
1	IARM Fe455-22	0.0037	0.036	0.006	0.0010	0.086	2.20	8.21	11.5	0.023	0.064	0.0031	0.25	0.0049	1.16	0.070	.
1	IARM 16C	0.003	0.024	0.007	0.0046	0.03	2.08	8.23	11.34	0.017	0.009	0.0030	0.248	(0.003)	1.16	0.070	0.008
2	CT ISO123A	0.003	0.035	0.007	<0.0005	0.031	0.010	11.10	11.67	0.016	0.92	0.003	<0.001	.	1.58	0.014	.
1	13X 46500A	(0.003)	0.004	0.0020	0.0010	0.075	0.0373	10.91	11.70	0.0101	0.948	0.0031	0.005	0.0030	1.51	0.0049	.
1	ECRM 284-3D	0.0025	0.0615	0.0049	0.0066	0.0442	0.0105	12.09	17.37	0.0366	2.236	0.0418	.	0.00074	0.0050	.	0.0039
2	CT ISO138A	0.002	0.48	0.001	0.006	<0.010	<0.001	39.98	<0.001	0.64	<0.001	<0.001	.	.	0.34	0.090	.

| # | Number | C | Mn | P | S | Si | Cu | Ni | Cr | Co | Mo | N | Nb | Sn | Ti | V | W |

Number	Al	As	B	Ca	Fe	Mg	O	Pb	Sb	Ta	Zr	Units	Comment
IARM FeZ100-18	(0.017)	.	0.002	.	.	.	(0.003)	.	.	.	.	31 mm Ø x 2 or 18 mm	
IARM 239C	0.007	(0.004)	0.0014	.	.	.	(0.007)	(0.004)	(0.0004)	(0.004)	(0.003)	31 mm Ø x 2 or 18 mm	
BS 179A	(0.009)	(0.003)	(0.001)	.	.	.	.	.	.	.	.	31 mm Ø x ~7 mm	last
ECRM 295-1D	0.0203	0.0041	0.0018	.	48.36	(0.0003)	.	.	0.0007	.	.	38 mm Ø x 25 mm	
BS 179C	0.0078	0.0034	0.0015	(0.0003)	[61.6]	(0.0004)	0.0038	.	0.0005	(0.0006)	(0.0042)	38 mm Ø x ~7 or 19+ mm	17025
BS 179B	0.0070	0.0036	0.0015	(0.0004)	[61.5]	(0.0004)	0.0037	.	0.0005	(0.0006)	(0.005)	38 mm Ø x 19+ mm	17025
VS LG57	0.151	.	.	.	.	.	.	.	.	.	.	~47 mm Ø x ~30 mm	
13X 34700A	0.023	.	0.0008	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
ECRM 287-1D	.	.	0.924	.	.	.	.	.	.	.	.	38 mm Ø x 25 or 30 mm	
13X NSA11A	(0.021)	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~15 mm	
IARM 157D	0.020	.	0.0007	.	48.0	.	.	.	.	.	.	31 mm Ø x 2 or 18 mm	
CZ SL-2A	0.005	0.008	0.002	.	.	.	.	.	.	.	.	~39 mm Ø x 25 mm	
IARM Fe155PH-18	0.014	(0.0026)	(0.0005)	.	75.03	.	0.0028	.	.	.	.	31 mm Ø x 2 or 18 mm	
TL 2002D	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm	
BS 189A	0.0129	0.0039	(0.0002)	(0.0004)	[48.1]	.	0.0024	.	.	.	(0.001)	38 mm Ø x ~7 or 19+ mm	17025
SS 466/2	0.0018	0.0020	0.0039	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
ECRM 298-2D	0.0148	0.0028	0.0024	.	.	.	.	.	0.0006	.	.	38 mm Ø x 25 mm	
IARM Fe316L-23	(0.005)	(0.006)	0.0018	.	.	.	(0.007)	.	.	.	.	disc	
NILAB 501HA D	0.003	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 20 mm	
KUT S22	.	.	.	.	[68.8]	.	.	.	.	.	.	30-35 mm Ø x 18 mm or 40 mm	
IARM Fe904L-22	0.036	0.0044	(0.0005)	0.0041	49.0	0.0009	0.0018	(0.0004)	0.0018	(0.0031)	(0.0024)	40 mm Ø x 3 or 19 mm	
13X NSA7B	0.0142	.	0.0018	.	.	.	.	0.0009	.	.	.	~41 mm Ø x ~15 mm	
IARM Fe304L-22	0.0020	0.0054	0.0010	0.0005	.	.	(0.005)	.	0.0025	.	.	38 mm Ø x 3 or 19 mm	
IARM 239B	0.008	.	0.0008	.	.	.	(0.004)	.	.	.	(0.002)	31 mm Ø x 2 mm	
ECRM 379-1D	(0.0024)	(0.0018)	0.00190	0.0033	(35.6)	(0.0006)	(0.0027)	.	0.00057	.	(0.0003)	38 or 45 mm Ø x 25 mm	
NCS HS41753a	.	.	.	.	.	.	.	.	.	.	.	37 mm Ø x 35 mm	
CT 455	.	.	0.0024	.	.	.	.	<0.001	.	.	.	30-35 mm Ø x ~19 mm	Ag: 0.0002
CT ISO124A	.	.	.	.	50.65	.	.	.	.	.	.	44-47 mm Ø x ~11 or ~19 mm	Se: 0.167
HRT FE2016-H	.	.	.	.	.	.	.	.	.	.	.	30 mm Ø x 20 mm	
SS 461/1	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
SS 477	0.0303	0.00399	0.00198	.	.	0.00053	.	.	0.00078	.	.	38 mm Ø x 19 mm	
14X 93603A	0.0404	.	.	.	.	0.0019	.	.	.	.	(0.0009)	~40 mm Ø x ~15 mm	
13X 30600A	0.020	.	.	.	.	0.0016	.	.	.	.	.	~32 mm Ø x ~20 mm	
BS 96A	0.08	.	(0.0017)	.	.	.	.	.	.	.	.	38 mm Ø x ~7 or 19+ mm	
JK 27B	.	.	0.00072	0.0022	.	.	.	.	.	.	.	~37 mm Ø x 25 mm	
BS SS1962	0.067	0.002	0.0018	.	.	.	(0.001)	.	.	.	.	38 mm Ø x ~7 or 19+ mm	
IARM 354A	(0.05)	(0.002)	0.0023	(0.0003)	.	(0.0001)	(0.0012)	(0.004)	(0.0002)	.	.	31 mm Ø x 2 or 18 mm	
13X 45500A	0.073	.	.	.	.	.	.	.	.	(0.0050)	.	~38 mm Ø x ~15 mm	
IARM Fe455-22	0.073	0.0028	0.0011	.	.	.	0.0014	.	.	.	.	disc	
IARM 16C	0.072	(0.003)	0.0011	.	.	.	0.0014	.	.	.	0.0010	31 mm Ø x 2 or 18 mm	
CT ISO123A	0.027	.	0.0021	.	74.72	.	.	.	.	.	<0.002	44-47 mm Ø x ~16 mm	
13X 46500A	0.069	.	0.0016	.	.	.	.	.	.	.	.	~32 mm Ø x ~20 mm	
ECRM 284-3D	.	0.00131	0.00020	.	.	.	.	.	.	.	.	39 mm Ø x 28 mm	
CT ISO138A	0.002	.	.	.	58.53	.	.	.	.	.	.	30-35 mm Ø x ~16 mm	

| Number | Al | As | B | Ca | Fe | Mg | O | Pb | Sb | Ta | Zr | Units | Comment |

STAINLESS AND HIGH ALLOY STEEL XRF SETS

AVAILABLE IN SETS OR INDIVIDUALLY ~7 thick mm discs

Grade	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	N	Ti	V	W
BS 400-SS-16															
182FM	BS 150	0.048	1.71	0.020	0.33	0.43	0.042	0.19	18.61	0.024	1.97	0.029	(0.002)	0.054	0.01
410	BS 410C	0.131	0.381	0.0206	0.0051	0.366	0.084	0.352	12.78	0.0185	0.055	0.039	0.0006	0.0006	0.0131
416	BS 90F	0.085	0.53	0.023	0.328	0.58	0.12	0.30	13.01	0.021	0.14	0.037	(0.002)	0.076	0.032
416 Se	BS 151	0.090	0.41	0.021	0.018	0.65	0.11	0.24	13.19	0.018	0.088	0.022	(<0.003)	0.046	0.010
420	BS 98	0.309	0.48	0.019	0.0014	0.72	0.098	0.21	13.35	0.020	0.034	0.0181	0.002	0.075	0.009
420F	BS 152	0.32	0.36	0.022	0.275	0.44	0.050	0.14	13.41	0.015	0.061	0.020	(0.002)	0.051	<0.01
422	BS 97	0.216	0.71	0.021	0.0004	0.39	0.066	0.76	11.82	0.041	1.05	0.030	(0.002)	0.21	0.95
430	BS 91E	0.066	0.42	0.017	0.002	0.52	0.05	0.17	16.58	0.02	0.035	0.032	(0.002)	0.09	0.01
430F	BS 153	0.026	0.41	0.018	0.280	0.53	0.052	0.140	17.38	0.017	0.30	0.021	(0.004)	0.045	(0.002)
431	BS 92B	0.150	0.42	0.021	0.003	0.42	0.13	2.12	15.92	0.04	0.17	0.073	(0.002)	0.07	0.02
440C	BS 93E	1.02	0.52	0.022	0.0010	0.90	0.12	0.35	17.33	0.048	0.50	0.0359	0.007	0.24	0.11
440F	BS 155	1.00	0.35	0.014	0.145	0.40	0.035	0.13	16.64	0.019	0.46	0.032	(0.002)	0.10	.
440F Se	BS 156	1.06	1.15	0.022	0.007	0.47	0.09	0.35	16.87	0.047	0.50	0.041	0.001	0.13	0.11
446	BS 94C	0.057	0.45	0.024	0.002	0.62	0.056	0.43	25.90	0.042	0.20	0.065	.	0.12	(0.03)
450	BS 95A	0.035	0.58	0.026	0.004	0.46	1.50	6.42	14.72	0.081	0.73	0.0255	(0.003)	0.052	0.02
455	BS 96A	0.009	0.04	0.007	0.004	0.06	2.07	8.38	11.62	0.03	0.021		1.18	0.07	.
BS HAS-12															
16Cr-6Mn-4Si	BS 191	0.098	5.71	0.024	0.023	3.66	0.33	5.34	16.33	0.11	0.36	0.117	0.012	0.083	0.033
17Cr-15Mn	BS 182	0.037	15.09	0.022	(0.003)	0.46	0.56	1.11	16.67	0.032	0.99	(0.40)	(0.003)	0.059	(0.01)
18Cr-12Mn	BS 193	0.104	12.11	0.018	0.002	0.66	0.088	1.82	18.48	0.028	0.21	0.37	0.003	0.107	(0.007)
A-286	BS 188B	0.046	0.247	0.016	(0.0007)	0.266	0.120	24.81	14.32	0.274	1.30	0.0021	2.20	0.264	0.043
AL-6XN	BS 189A	0.0147	0.639	0.019	(0.001)	0.30	0.184	23.8	20.4	0.100	6.04	0.198	0.0065	0.054	0.037
Carp. 20Cb3	BS 187A	0.022	0.52	0.017	0.0025	0.26	3.10	33.06	19.75	0.32	2.06	0.0157	(0.002)	0.10	(0.02)
Ferralium 255	BS 179A	0.017	1.04	0.021	0.001	0.44	1.94	5.84	25.45	0.58	3.24	0.184	0.006	0.070	(0.2)
Greek Ascoloy	BS 183B	0.181	0.344	0.018	0.0042	0.41	0.074	1.96	12.45	0.032	0.33	0.044	(0.0016)	0.165	3.5
Invar 36	BS 186A	0.040	0.72	0.008	0.0053	0.19	0.016	35.86	0.16	0.028	0.0032	0.0026	(<0.003)	0.0012	(0.01)
Nitronic 40	BS 190	0.022	9.72	0.015	0.001	0.46	0.072	6.74	19.57	0.044	0.15	0.255	0.002	0.11	0.015
Nitronic 50	BS 180A	0.018	5.05	0.012	0.001	0.32	0.067	13.19	21.09	0.039	2.04	0.334	(0.002)	0.20	0.02
Nitronic 60	BS 181A	0.071	8.16	0.019	0.001	4.03	0.18	8.15	16.52	0.072	0.21	0.148	0.007	0.094	0.04
BS SS-17															
13-8PH Mo	BS 184A	0.035	0.06	0.007	0.001	0.080	0.041	8.34	12.66	0.036	2.20	0.0045	0.051	0.014	0.032
15-5PH	BS 185A	0.033	0.49	0.022	0.002	0.38	3.41	4.43	14.46	0.026	0.30	0.027	(0.001)	0.048	(0.014)
17-4PH	BS 17-4PHA	0.018	0.85	0.023	0.022	0.40	3.30	4.69	15.40	0.072	0.34	0.022	.	0.043	.
17-7PH	BS 192	0.075	0.84	0.025	0.001	0.38	0.41	7.10	16.42	0.104	0.42	0.029	0.078	0.13	0.04
253 MA	BS 253	0.094	0.58	0.018	<0.001	1.81	0.14	10.89	20.68	0.15	0.21	0.146	0.005	0.050	0.03
255 Ferralium	BS 179C	0.0164	0.878	0.0236	0.0003	0.373	1.53	6.10	25.9	0.0386	3.34	0.236	(0.0005)	0.080	0.056
303	BS 303	0.044	1.80	0.028	0.326	0.415	0.627	8.17	17.23	0.071	0.410	0.023	0.017	0.056	0.023
304L	BS 304C	0.024	1.37	0.034	0.027	0.302	0.524	8.53	18.2	0.229	0.419	0.077	(0.0024)	0.083	0.043
309	BS 82E	0.062	1.61	0.027	0.001	0.58	0.26	12.49	22.38	0.12	0.31	0.072	0.003	0.064	0.041
310	BS 83G	0.073	1.66	0.024	0.004	0.56	0.114	19.15	24.50	0.153	0.085	0.026	(0.003)	0.077	0.007
316	BS 316F	0.015	1.46	0.029	0.026	0.55	0.437	10.09	16.79	0.126	2.10	0.061	0.011	0.062	0.045
317L	BS 317L	0.025	1.17	0.029	0.0017	0.67	0.23	13.51	18.2	0.14	3.07	0.055	0.0034	0.091	0.017
318	BS 2205A	0.021	1.48	0.029	0.0006	0.53	0.300	5.26	22.73	0.071	3.17	0.157	(0.002)	0.083	(0.02)
321	BS 85D	0.048	1.69	0.024	0.024	0.54	0.45	9.98	17.09	0.97	0.59	(0.02)	0.48	0.132	(0.07)
330	BS 86F	0.054	1.30	0.021	0.0011	1.22	0.23	34.99	18.74	0.098	0.24	0.035	(0.006)	0.061	(0.03)
347	BS 347B	0.051	1.57	0.028	0.026	0.51	0.15	9.16	17.24	0.05	0.38	0.056	(0.002)	0.04	(0.005)
355	BS 355	0.136	0.862	0.0171	0.0003	0.374	0.173	4.18	15.43	0.053	2.73	0.081	0.0007	0.106	0.0069

| Grade | Number | C | Mn | P | S | Si | Cu | Ni | Cr | Co | Mo | N | Ti | V | W |

Number	Al	As	B	Ca	Fe	Nb	O	Pb	Sb	Se	Sn	Zr	Comment
BS 400-SS-16													
BS 150	0.002	.	.	.	.	0.003	.	.	.	.	(0.003)	.	
BS 410C	0.0079	0.0029	(0.0001)	0.0022	[85.4]	0.0056	0.0051	(0.0001)	(0.0002)	.	0.0023	(0.0002)	17025
BS 90F	(0.006)	.	.	.	.	0.011	.	.	.	.	0.005	.	
BS 151	(0.002)	.	.	.	.	0.005	.	.	.	0.328	0.005	.	
BS 98	0.003	.	.	(0.0005)	.	0.003	.	.	.	.	0.006	.	
BS 152	(0.002)	.	.	.	.	0.006	.	.	.	.	0.003	.	
BS 97	0.018	.	.	.	.	0.007	.	.	.	.	(0.003)	.	
BS 91E	(0.002)	.	.	0.0008	.	(0.004)	.	.	.	.	0.004	.	
BS 153	0.002	(0.004)	.	.	.	0.002	.	(0.001)	.	.	0.002	.	
BS 92B	(0.002)	.	.	(0.0009)	.	(0.006)	.	.	.	.	0.006	.	
BS 93E	0.009	.	.	.	.	0.005	.	.	.	.	0.003	.	
BS 155	(0.001)	.	.	.	.	0.002	.	.	.	.	(0.003)	.	
BS 156	(<0.002)	.	.	.	.	0.005	.	.	.	0.142	(0.004)	.	
BS 94C	0.004	.	.	0.0008	.	0.032	.	.	.	.	0.006	.	
BS 95A	0.002	.	0.0010	0.0008	.	0.55	.	.	.	.	0.008	.	
BS 96A	0.08	.	(0.0017)	.	.	0.26	.	.	.	.	.	.	
BS HAS-12													
BS 191	(0.002)	.	(0.0006)	.	.	0.024	0.002	.	.	.	(0.006)	.	
BS 182	.	.	.	.	.	(0.005)	.	.	.	.	(0.003)	.	
BS 193	(0.003)	.	0.0007	.	.	0.014	.	.	.	.	0.004	.	
BS 188B	0.168	0.0045	0.0047	(0.00003)	55.8	0.099	0.0006	(0.0001)	(0.0006)	.	0.0051	(0.002)	17025
BS 189A	0.0129	0.0039	(0.0002)	(0.0004)	[48.1]	(0.13)	0.0024	.	.	.	0.0035	(0.001)	17025
BS 187A	(0.009)	.	0.0022	.	.	0.57	.	.	.	.	0.003	.	
BS 179A	(0.009)	.	(0.001)	.	.	0.030	.	.	.	.	0.005	.	
BS 183B	0.0009	(0.005)	(0.0007)	(0.0003)	80.4	(0.0075)	(0.0054)	(0.0003)	0.00091	.	0.0046	(0.0009)	17034
BS 186A	(0.001)	.	.	.	.	(<0.002)	.	.	.	0.229	(0.002)	.	
BS 190	(0.004)	.	0.0005	.	.	(0.004)	0.0045	.	.	.	0.003	.	
BS 180A	0.012	.	(0.0024)	.	.	0.20	0.003	.	.	.	(0.002)	.	
BS 181A	0.022	.	0.0009	.	.	0.017	0.0010	.	.	.	0.005	.	
BS SS-17													
BS 184A	1.00	.	(0.0004)	(0.0003)	.	(0.006)	.	.	.	.	(0.002)	.	
BS 185A	0.002	.	0.0017	(0.0002)	.	0.32	.	.	.	.	0.007	.	
BS 17-4PHA	.	.	0.0016	.	.	0.204	.	.	.	.	.	.	
BS 192	1.15	.	(0.0004)	0.0007	.	0.17	.	.	.	.	0.009	.	
BS 253	0.016	0.005	.	.	.	0.017	.	.	.	.	0.006	.	
BS 179C	0.0078	0.0034	0.0015	(0.0003)	[61.6]	0.009	0.0038	(0.00002)	0.0005	.	0.0018	(0.0042)	17025
BS 303	0.0019	.	0.0013	(0.0015)	[70.7]	0.008	0.0058	.	(0.002)	.	0.0091	.	17025
BS 304C	0.0022	0.0047	0.0005	(0.0002)	70.1	H:0.0004	0.0050	.	<0.05	.	0.0119	(0.002)	17034
BS 82E	0.006	.	0.0024	0.0014	.	0.062	.	.	.	.	0.006	.	
BS 83G	(0.004)	.	(0.001)	.	.	0.061	0.0064	.	.	.	0.003	.	
BS 316F	(0.002)	0.0067	0.0019	0.0018	68.1	0.011	0.0055	(0.0002)	.	.	0.0092	(0.001)	17034
BS 317L	0.0044	(0.003)	0.0012	0.0017	[62.8]	0.031	(0.006)	(0.0002)	(0.002)	.	0.0049	(0.004)	
BS 2205A	(0.004)	0.0072	0.0022	0.0007	66.2	0.010	0.0046	.	.	.	0.0058	(0.003)	17034
BS 85D	0.13	(0.01)	(0.001)	0.0004	[67.8]	0.062	(0.002)	.	(0.001)	.	0.0062	(0.004)	17034
BS 86F	(0.007)	(0.003)	0.0026	(0.001)	.	0.19	.	(0.001)	.	.	0.004	.	
BS 347B	0.002	(0.003)	0.0036	(0.0005)	.	0.71	0.005	.	.	.	0.006	.	
BS 355	0.0192	0.0039	(0.0001)	(0.0002)	[75.9]	0.0103	0.0020	(0.00003)	(0.0009)	.	0.0038	(0.003)	

| Number | Al | As | B | Ca | Fe | Nb | O | Pb | Sb | Se | Sn | Zr | Comment |

CRM CAST IRON SETS

AVAILABLE IN SETS ONLY, as grouped

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Mo	Sn	Ti	V	Ce	La	Mg	N
30 mm Ø x 28 mm																	
NCS HS11712a-6	4.02	1.41	0.021	0.026	0.163	1.83	1.89	0.112	0.019	0.726	0.057	0.238	0.509	<0.0001	<0.0001	0.104	0.013
NCS HS11712a-7	3.94	1.38	0.085	0.0048	0.918	1.10	1.37	1.05	0.214	0.168	0.134	0.114	0.390	<0.0001	<0.0001	0.056	0.0063
NCS HS11712a-5	3.52	0.311	0.420	0.019	1.17	0.389	1.03	0.766	.	0.629	0.013	0.161	0.324	<0.0001	<0.0001	0.021	0.0047
NCS HS11712a-4	3.16	0.462	0.396	0.017	1.96	0.921	0.778	1.40	0.0073	0.428	0.024	0.065	0.166	<0.0001	<0.0001	0.025	0.0073
NCS HS11712a-2	2.22	0.301	0.043	0.058	2.44	0.458	0.341	2.13	0.060	0.087	0.044	0.065	0.055	0.0010	0.010	0.0085	0.024
NCS HS11712a-3	2.55	0.878	0.071	0.045	1.50	0.641	0.519	0.417	0.034	0.354	0.021	0.027	0.085	0.027	0.0061	0.024	0.024
NCS HS11712a-1	1.75	0.080	0.580	0.119	3.40	0.025	0.030	2.48	0.248	0.031	0.0031	0.038	0.021	<0.0001	<0.0001	0.0006	0.015
30 mm Ø x 30 mm																	
NCS HS19701-7	4.13	2.06	0.306	0.111	1.85	.	0.026	0.157	.	.	0.043	0.399	0.821	.	.	.	.
NCS HS19701-6	3.93	1.46	0.168	0.124	0.99	.	0.094	0.387	.	(0.112)	0.0018	0.105	0.506	.	.	.	.
NCS HS19701-5	3.67	0.596	0.072	0.117	0.183	.	0.502	0.171	.	(0.68)	0.0022	0.066	0.335	.	.	.	.
NCS HS19701-4	3.70	0.857	0.087	0.076	0.451	.	0.032	0.117	.	(0.031)	0.0017	0.030	0.158	.	.	.	.
NCS HS19701-3	3.29	1.22	0.045	0.056	0.689	.	0.046	0.030	.	.	0.009	0.043	0.071	.	.	.	.
NCS HS19701-2	2.99	0.329	0.033	0.038	0.937	.	0.194	0.080	.	.	0.024	0.216	0.044	.	.	.	.
NCS HS19701-1	2.46	0.072	0.011	0.019	0.099	.	0.183	0.511	.	.	0.005	0.0059	0.0090	.	.	.	.

RM GRAY IRON

as cast (not chill cast) CONTAINS FREE GRAPHITE OES regularly requires extension of preburn time to analyze correctly

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	As	Co	Mo	Sb	Sn	Ti	V	mm Ø x mm H
BS 20G	3.33	0.58	0.028	0.029	3.02	0.54	0.38	0.086	0.008	0.004	0.022	0.19	(<0.001)	0.12	0.012	0.018	47 x 19+
BS 20W	3.27	0.62	0.045	0.036	2.64	0.29	0.082	0.092	0.004	0.004	0.005	0.054	(<0.001)	0.086	0.015	0.007	47 x 13
BS 20R	3.25	0.62	0.047	0.034	2.72	0.35	0.096	0.094	0.005	0.004	0.006	0.053	(<0.001)	0.104	0.015	0.007	47 x 19+
BS 20E	3.24	0.80	0.042	0.044	2.29	0.23	0.156	0.088	0.006	(0.003)	0.006	0.042	(<0.002)	0.093	0.017	0.007	47 x 19+
BS 20P	3.22	0.63	0.032	0.044	2.62	0.067	0.143	0.079	0.008	(0.004)	0.018	0.033	(<0.001)	0.099	0.018	0.017	44 x 19+

RM Si-Mo CAST IRON

BAS SIMO: 48 mm x 42 mm x 12 mm block CTIF: each unit = one pair 43 mm Ø x 5 mm discs

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	Ti	V	Co	As	Sn	Ce	Mg	
CTIF SiMo-3	3.18	0.61	0.053	(0.0006)	4.02	0.0325	0.066	0.110	0.604	1.15	0.0176	0.0171	0.0296	.	.	.	0.013	
CTIF SiMo-1	2.98	0.365	0.013	(0.0015)	4.03	0.035	0.065	0.036	0.752	.	(0.018)	(0.018)	(0.03)	.	.	.	0.019	
CTIF SiMo-5	2.94	0.439	0.0282	.	4.31	0.0121	0.194	0.032	0.841	.	0.010	(0.0095)	(0.013)	.	.	.	.	
CTIF SiMo-2	(2.85)	0.335	0.0260	(0.001)	3.85	0.036	(0.061)	0.038	1.04	1.51	(0.016)	(0.017)	(0.030)	.	.	.	0.072	
BAS SIMO 1/3	2.70	0.333	0.040	0.007	4.07	0.028	0.030	0.899	0.776	0.026	0.007	0.007	0.013	0.047	0.048	.	0.036	
CTIF SiMo-4	2.70	0.280	0.0211	(0.0015)	4.35	0.0657	(0.029)	0.0845	0.400	(0.038)	0.0171	0.0133	(0.015)	.	.	.	0.100	
BAS SIMO 1/6	2.50	0.372	0.036	0.005	4.04	0.016	0.060	0.750	0.727	0.025	0.010	0.020	0.025	(0.001)	0.053	.	(0.002)	
BAS SIMO 2/4	2.26	0.440	0.026	0.009	4.49	0.009	0.015	0.896	0.443	0.013	0.006	0.008	0.005	(0.002)	0.056	0.006	(0.002)	
BAS SIMO 2/2	2.14	0.434	0.025	0.007	4.75	0.010	0.0189	0.856	0.484	0.013	0.005	0.009	0.0029	0.039	0.038	0.006	0.026	last

DUCTILE / NODULAR IRON

= Class, where 1 = CRM and 2 = RM * Provisional Analysis

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Ce	Co	Mg	Mo	Ti	V
1	SCRM 666/12	3.599	0.106	.	.	1.763	0.0581	1.709	0.102	.	.	.	**0.083**	0.0979	0.1069	0.0486
1	SCRM 667/13	3.04	0.222	.	.	2.866	0.497	1.303	0.294	.	0.110	.	**0.070**	.	.	0.103
1	**BS 286CI**	3.27	0.714	0.20	(0.012)	2.00	0.363	1.43	0.349	0.012	(0.03)	0.027	**0.052**	0.258	0.052	0.150
1	**BS 286CH**	3.27	0.714	0.20	(0.012)	2.00	0.363	1.43	0.349	0.012	(0.03)	0.027	**0.051**	0.258	0.052	0.150
1	**BS 286CG**	3.27	0.714	0.20	(0.012)	2.00	0.363	1.43	0.349	0.012	(0.03)	0.027	**0.050**	0.258	0.052	0.150
1	**BS 286CF**	3.27	0.714	0.20	(0.012)	2.00	0.363	1.43	0.349	0.012	(0.03)	0.027	**0.049**	0.258	0.052	0.150
1	**BS 286CE**	3.27	0.714	0.20	(0.012)	2.00	0.363	1.43	0.349	0.012	(0.03)	0.027	**0.048**	0.258	0.052	0.150
1	**BS 291HK**	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.040	.	(0.004)	**0.047**	0.030	0.0223	0.0206
1	**BS 291HJ**	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.040	.	(0.004)	**0.046**	0.030	0.0223	0.0206
1	**BS 291HI**	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.039	.	(0.004)	**0.045**	0.030	0.0223	0.02061
1	**BS 291HH**	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.038	.	(0.004)	**0.044**	0.030	0.0223	0.0206
1	**BS 291HG**	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.037	.	(0.004)	**0.043**	0.030	0.0223	0.0206
1	**BS 291HF**	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.036	.	(0.004)	**0.042**	0.030	0.0223	0.0206
1	SCRM 670/25	3.178	0.324	0.0466	0.0085	2.152	0.978	0.965	0.488	.	0.0092	.	**0.0414**	0.0110	0.0820	0.0125
1	**BS 285CJ**	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.022	.	(0.005)	**0.041**	0.190	0.044	0.133
1	**BS 291HE**	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.035	.	(0.004)	**0.041**	0.030	0.0223	0.0206
1	**BS 285CI**	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.021	.	(0.005)	**0.040**	0.190	0.044	0.133
1	**BS 291HD**	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.035	.	(0.004)	**0.040**	0.030	0.0223	0.0206
1	**BS 285CH**	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.021	.	(0.005)	**0.039**	0.190	0.044	0.133
1	**BS 291HC**	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.034	.	(0.004)	**0.039**	0.030	0.0223	0.0206
1	**BS 285CG**	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.021	.	(0.005)	**0.038**	0.190	0.044	0.133
1	**BS 285CF**	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.021	.	(0.005)	**0.037**	0.190	0.044	0.133
1	**BS 285CE**	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.020	.	(0.005)	**0.036**	0.190	0.044	0.133
1	**BS 285CD**	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.020	.	(0.005)	**0.035**	0.190	0.044	0.133
1	**BS 285CC**	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.020	.	(0.005)	**0.034**	0.190	0.044	0.133
1	**BS 285CB**	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.019	.	(0.005)	**0.033**	0.190	0.044	0.133
1	SRM C1137a	2.86	0.52	0.087	0.017	1.15	0.192	2.17	0.643	(0.007)	0.016	.	**0.032**	0.86	(0.04)	0.019
1	SCRM 669/15	3.09	0.52	0.041	0.0108	2.41	0.217	0.48	0.260	.	0.040	.	**0.023**	0.057	0.058	0.50
1	SCRM 668/14	3.77	0.702	0.045	0.0220	1.72	0.65	0.096	0.99	.	0.023	.	**0.009**	0.0179	0.086	0.195
1	SRM C2424	2.68	0.268	0.041	0.024	3.37	0.125	0.061	0.13	(<0.01)	0.0046	(0.05)	**0.006**	0.019	0.050	0.083

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Ce	Co	Mg	Mo	Ti	V

Number	As	B	Ca	Fe	La	Nb	Pb	Sb	Sn	W	Zr	Units	
SCRM 666/12	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm	
SCRM 667/13	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm	
BS 286CI	(0.002)	0.0086	0.0012	91.1	(0.005)	(0.005)	(0.0007)	.	(0.01)	0.0025	(0.003)	~35 mm Ø x ~30 mm	**17034**
BS 286CH	(0.002)	0.0086	0.0012	91.1	(0.005)	(0.005)	(0.0007)	.	(0.01)	0.0025	(0.003)	~35 mm Ø x ~30 mm	**17034**
BS 286CG	(0.002)	0.0086	0.0012	91.1	(0.005)	(0.005)	(0.0007)	.	(0.01)	0.0025	(0.003)	~35 mm Ø x ~30 mm	**17034**
BS 286CF	(0.002)	0.0086	0.0012	91.1	(0.005)	(0.005)	(0.0007)	.	(0.01)	0.0025	(0.003)	~35 mm Ø x ~30 mm	**17034**
BS 286CE	(0.002)	0.0086	0.0012	91.1	(0.005)	(0.005)	(0.0007)	.	(0.01)	0.0025	(0.003)	~35 mm Ø x ~30 mm	**17034**
BS 291HK	(0.004)	0.0144	0.0010	93.19	H:0.0005	N:0.0064	<0.005	(0.006)	0.057	(0.003)	0.0019	~35 mm Ø x ~30 mm	**17034**
BS 291HJ	(0.004)	0.0144	0.0010	93.19	H:0.0005	N:0.0064	<0.005	(0.006)	0.057	(0.003)	0.0019	~35 mm Ø x ~30 mm	**17034**
BS 291HI	(0.004)	0.0144	0.0010	93.19	H:0.0005	N:0.0064	<0.005	(0.006)	0.057	(0.003)	0.0019	~35 mm Ø x ~30 mm	**17034**
BS 291HH	(0.004)	0.0144	0.0010	93.19	H:0.0005	N:0.0064	<0.005	(0.006)	0.057	(0.003)	0.0019	~35 mm Ø x ~30 mm	**17034**
BS 291HG	(0.004)	0.0144	0.0010	93.19	H:0.0005	N:0.0064	<0.005	(0.006)	0.057	(0.003)	0.0019	~35 mm Ø x ~30 mm	**17034**
BS 291HF	(0.004)	0.0144	0.0010	93.19	H:0.0005	N:0.0064	<0.005	(0.006)	0.057	(0.003)	0.0019	~35 mm Ø x ~30 mm	**17034**
SCRM 670/25	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm	
BS 285CJ	0.0022	(0.007)	0.0018	90.89	.	(0.004)	(0.0007)	(0.015)	(0.0014)	0.049	(0.005)	~33 mm Ø x ~30 mm	**17034**
BS 291HE	(0.004)	0.0144	0.0010	93.19	H:0.0005	N:0.0064	<0.005	(0.006)	0.057	(0.003)	0.0019	~35 mm Ø x ~30 mm	**17034**
BS 285CI	0.0022	(0.007)	0.0018	90.89	.	(0.004)	(0.0007)	(0.015)	(0.0014)	0.049	(0.005)	~33 mm Ø x ~30 mm	**17034**
BS 291HD	(0.004)	0.0144	0.0010	93.19	H:0.0005	N:0.0064	<0.005	(0.006)	0.057	(0.003)	0.0019	~35 mm Ø x ~30 mm	**17034**
BS 285CH	0.0022	(0.007)	0.0018	90.89	.	(0.004)	(0.0007)	(0.015)	(0.0014)	0.049	(0.005)	~33 mm Ø x ~30 mm	**17034**
BS 291HC	(0.004)	0.0144	0.0010	93.19	H:0.0005	N:0.0064	<0.005	(0.006)	0.057	(0.003)	0.0019	~35 mm Ø x ~30 mm	**17034**
BS 285CG	0.0022	(0.007)	0.0018	90.89	.	(0.004)	(0.0007)	(0.015)	(0.0014)	0.049	(0.005)	~33 mm Ø x ~30 mm	**17034**
BS 285CF	0.0022	(0.007)	0.0018	90.89	.	(0.004)	(0.0007)	(0.015)	(0.0014)	0.049	(0.005)	~33 mm Ø x ~30 mm	**17034**
BS 285CE	0.0022	(0.007)	0.0018	90.89	.	(0.004)	(0.0007)	(0.015)	(0.0014)	0.049	(0.005)	~33 mm Ø x ~30 mm	**17034**
BS 285CD	0.0022	(0.007)	0.0018	90.89	.	(0.004)	(0.0007)	(0.015)	(0.0014)	0.049	(0.005)	~33 mm Ø x ~30 mm	**17034**
BS 285CC	0.0022	(0.007)	0.0018	90.89	.	(0.004)	(0.0007)	(0.015)	(0.0014)	0.049	(0.005)	~33 mm Ø x ~30 mm	**17034**
BS 285CB	0.0022	(0.007)	0.0018	90.89	.	(0.004)	(0.0007)	(0.015)	(0.0014)	0.049	(0.005)	~33 mm Ø x ~30 mm	**17034**
SRM C1137a	.	.	.	.	.	.	.	.	.	.	.	32 mm Ø x 19 mm	
SCRM 669/15	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm	
SCRM 668/14	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm	
SRM C2424	.	(0.002)	.	.	0.0011	.	.	.	.	.	.	32 mm Ø x 19 mm	

Number	As	B	Ca	Fe	La	Nb	Pb	Sb	Sn	W	Zr	Units	

CAST IRON WITH MAGNESIUM - continued on the next page

= Class, where 1 = CRM and 2 = RM * Provisional Analysis

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mg	Te	Al	Ce	Co	Mo	Ti	V
1	CZ 20034 17b	4.38	0.501	0.089	0.0040	0.178	0.111	2.34	0.200	0.009	.	(0.002)	(0.003)	0.043	0.030	0.016	0.086
1	CZ 20034 17a	4.30	0.494	0.115	0.0034	0.170	0.082	2.38	0.200	0.007	.	(0.002)	(0.003)	0.043	0.030	0.016	0.086
1	CZ 20034 17c	4.08	0.503	0.104	0.0033	0.150	0.037	2.32	0.178	0.007	.	(0.002)	(0.003)	0.043	0.030	0.015	0.076
1	Y 2863-11A	4.03	0.61	0.613	0.026	0.79	0.96	0.46	1.65	0.008	.	.	.	.	0.94	0.30	0.079
2	CZ SPL17 43A	3.98	1.322	0.190	0.008	1.63	0.385	0.411	0.032	(0.04)	.	0.024	0.017	0.045	0.152	0.065	0.152
2	CZ SPL17 42A	3.94	0.764	0.294	0.0040	1.94	0.199	0.492	0.145	(0.06)	.	0.087	0.039	0.010	0.021	0.126	0.093
1	Y 451045	3.90	0.12	0.023	0.0027	2.29	0.022	0.45	0.028	0.033	.	.	.	.	0.0030	0.016	0.0014
1	SCRM 668/14	3.77	0.702	0.045	0.0220	1.72	0.65	0.096	0.99	0.009	.	.	0.023	.	0.0179	0.086	0.195
1	Y 2863-12	3.77	0.158	0.053	0.057	0.150	0.55	0.192	2.31	0.0024	.	.	.	.	0.44	0.030	0.229
1	CZ 02033 2f	3.77	0.091	0.159	0.009	1.23	0.89	0.658	0.022	0.053	.	0.024	0.018	(0.003)	(0.002)	0.021	0.010
1	VS ChG 25/1	3.75	0.67	0.013	0.0048	1.46	0.81	0.406	0.214	0.0096	.	.	.	.	0.271	0.0087	0.0070
1	CZ 02033 3c	3.68	0.333	0.026	0.007	2.15	0.421	0.040	0.100	0.006	(0.005)	0.024	0.013	0.026	0.490	0.021	0.016
1	SCRM 666/12	3.599	0.106	.	.	1.763	0.0581	1.709	0.102	0.0838	.	.	.	.	0.0979	0.1069	0.0486
1	VS ChG 27/1	3.59	1.20	0.039	0.019	1.97	0.351	0.030	0.139	.	.	0.011	.	.	0.131	0.060	0.070
2	Y 4510058B-18	3.59	0.435	0.047	0.020	1.68	0.268	0.595	0.526	0.042	.	.	0.022	.	0.180	0.044	0.174
2	Y 4510058C-18	3.59	0.435	0.047	0.020	1.68	0.268	0.595	0.526	0.039	.	.	0.022	.	0.180	0.044	0.174
2	Y 4510058D-18	3.59	0.435	0.047	0.020	1.68	0.268	0.595	0.526	0.036	.	.	0.022	.	0.180	0.044	0.174
2	Y 4510058E-18	3.59	0.435	0.047	0.020	1.68	0.268	0.595	0.526	0.032	.	.	0.022	.	0.180	0.044	0.174
2	CZ SPL17 31A	3.54	0.041	0.025	0.006	2.10	0.005	0.538	0.019	0.070	.	0.005	(0.004)	0.022	0.004	0.007	0.008
2	CZ SPL17 34A	3.48	0.980	0.105	0.008	2.29	0.230	0.493	0.102	0.026	.	0.010	0.008	0.025	0.072	0.044	0.073
1	CZ 20034 15c	3.47	0.060	0.054	0.0028	1.68	1.123	0.728	0.078	0.040	.	0.010	0.030	0.026	(0.002)	0.036	0.019
2	CZ SPL17 32A	3.39	0.288	0.037	0.007	2.74	0.306	0.015	0.060	0.024	.	0.029	(0.004)	(0.002)	0.116	0.044	0.005
2	CZ SPL17 40A	3.38	0.042	0.021	0.0035	1.98	0.010	0.045	0.031	0.007	.	0.096	0.012	0.027	0.005	0.015	0.014
1	VS ChG 28	3.29	0.414	0.025	0.015	2.22	1.29	0.166	0.127	0.010	.	0.015	.	.	0.0024	0.0041	0.0020
1	VS ChG 28/1	3.28	0.420	0.039	0.008	2.14	1.30	0.177	0.177	0.014	.	0.0097	.	.	.	0.019	0.013

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mg	Te	Al	Ce	Co	Mo	Ti	V
1	CZ 02033 1f	3.23	0.693	0.043	0.005	2.68	0.018	0.373	0.035	0.070	(0.007)	0.073	0.036	0.024	0.182	0.041	0.014
1	CZ 20034 13c	3.15	0.704	0.0261	0.0044	2.23	0.089	1.299	0.124	0.064	.	0.022	0.011	0.024	0.360	0.015	0.043
1	CZ 20034 14c	3.14	0.275	0.0162	0.0081	2.49	0.585	0.030	0.045	0.017	.	0.007	0.019	0.009	0.646	0.018	0.013
1	CZ 20034 13a	3.13	0.691	0.0244	0.0046	2.19	0.021	1.266	0.122	0.053	.	0.017	0.011	0.024	0.364	0.014	0.048
1	CZ 20034 13b	3.12	0.692	0.0243	0.0041	2.12	0.021	1.313	0.125	0.054	.	0.019	0.011	0.024	0.364	0.012	0.048
1	BS CC-11A	3.07	1.23	0.020	0.011	1.90	0.007	0.046	0.048	0.014	0.026	0.0055	0.018	(0.007)	0.0063	0.0091	0.0066
1	VS ChM5/1	3.04	0.311	0.056	0.016	1.37	.	.	.	0.045	.	0.013	.	.	.	.	.
1	SCRM 667/13	3.04	0.222	.	.	2.866	0.497	1.303	0.294	0.070	.	.	0.110	.	.	.	0.103
1	VS ChG 24/1	3.04	0.280	0.237	0.007	2.40	0.104	0.85	0.030	0.021	.	0.027	0.021	.	0.028	0.089	0.026
1	VS ChM6/1	3.03	0.54	0.055	0.0074	2.75	.	.	.	0.072	.	0.022	.	.	.	.	.
2	CZ SPL17 36A	3.02	0.057	0.026	0.010	2.13	0.007	0.011	0.014	0.012	.	(0.003)	0.0007	(0.004)	0.004	0.021	0.021
1	BS CC-11B	2.97	1.17	0.020	0.008	1.94	0.0210	0.173	0.189	0.025	0.019	0.028	0.045	(0.022)	0.018	0.031	0.0179
1	VS ChM13	2.96	1.05	0.043	0.009	2.98	0.062	1.65	0.273	0.09	.	0.065	.	.	.	0.018	0.0096
1	VS ChG 26/1	2.96	0.132	0.104	0.0058	2.89	0.022	1.41	0.050	0.052	.	0.041	0.017	.	0.070	0.016	0.159
1	SCRM 669/14	2.955	0.526	.	.	2.201	0.194	0.473	0.214	0.0224	.	.	0.0415	.	0.0550	0.0499	0.532
1	VS ChG 26	(2.9)	0.126	0.123	0.0041	2.98	0.014	1.52	0.050	0.044	.	0.038	.	.	0.075	0.0026	0.040
1	VS ChM10	2.89	0.43	0.067	0.017	1.13	0.082	0.85	0.067	0.024	.	0.005	.	.	.	0.028	0.079
1	SRM C1137a	2.86	0.52	0.087	0.017	1.15	0.192	2.17	0.643	0.032	.	(0.007)	0.016	.	0.86	(0.04)	0.019
2	CZ SPL17 33A	2.75	0.710	0.060	0.007	3.10	0.730	0.389	0.239	0.021	.	0.054	0.026	0.015	0.220	0.130	0.356
1	SRM C2424	2.68	0.268	0.041	0.024	3.37	0.125	0.061	0.13	0.006	.	(<0.01)	0.0046	(0.05)	0.019	0.050	0.083
1	VS ChM9	2.61	1.28	0.075	0.021	1.59	0.095	0.38	0.083	0.011	.	0.016	.	.	.	0.027	0.068
1	VS ChM11	2.26	0.77	0.032	0.011	2.32	0.067	1.75	0.122	0.066	.	0.035	.	.	.	0.014	0.0044
1	Y 2863-7	1.98	3.42	0.067	0.0061	3.10	0.089	4.47	0.150	0.050	.	.	0.019	.	0.052	0.060	0.87

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mg	Te	Al	Ce	Co	Mo	Ti	V

BS: 28-34 mm Ø x 17-35 mm CKD 24x: 37 mm x 37 mm x ~15-20 mm CZ: 40 mm Ø x 18 mm SCRM: 48 mm x 42 mm x 12 mm SRM: 32 mm Ø x 19 mm VS: ~40 mm Ø x ~40 mm Y: 30 mm Ø x 30 mm

CAST IRON WITH MAGNESIUM - continued from the previous page

sizes shown below

Number	As	B	Bi	Ca	Fe	La	Nb	Pb	Sb	Se	Sn	W	Zr	Other
CZ 20034 17b	0.008	(0.0002)	(0.001)	.	.	.	.	(0.002)	.	.	(0.002)	0.004	.	
CZ 20034 17a	0.007	(0.0002)	(0.001)	.	.	.	.	(0.002)	.	.	(0.002)	0.004	.	
CZ 20034 17c	0.0005	(0.0006)	(0.002)	.	.	.	.	(0.002)	.	.	(0.002)	0.004	.	
Y 2863-11A	(0.022)	0.053	.	.	.	.	0.34	(0.0057)	(0.174)	.	(0.108)	0.010	.	30mm Ø x 28mm
~~CZ SPL17 43A~~	~~.~~	~~0.0014~~	~~(0.002)~~	~~.~~	~~.~~	~~.~~	~~0.008~~	~~0.014~~	~~(0.004)~~	~~.~~	~~0.067~~	~~0.038~~	~~Zn:0.013~~	
~~CZ SPL17 42A~~	~~.~~	~~0.0036~~	~~(0.002)~~	~~.~~	~~.~~	~~.~~	~~0.045~~	~~0.020~~	~~0.015~~	~~.~~	~~0.027~~	~~0.020~~	~~Zn:0.013~~	
~~Y 451045~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~last~~
SCRM 668/14	.	.	.	.	.	.	.	.	.	.	.	.	.	
Y 2863-12	(0.0097)	0.0078	.	.	.	.	0.21	(0.056)	(0.471)	.	(0.307)	0.13	.	
~~CZ 02033 2f~~	~~.~~	~~0.0020~~	~~(0.002)~~	~~.~~	~~.~~	~~.~~	~~.~~	~~0.005~~	~~0.028~~	~~.~~	~~0.014~~	~~(0.003)~~	~~(0.005)~~	~~Zn: 0.018~~
VS ChG 25/1	.	.	.	.	.	.	.	.	0.067	.	0.011	.	.	
CZ 02033 3c	(0.007)	0.0044	(0.002)	.	.	.	.	0.005	.	.	0.009	(0.003)	.	
SCRM 666/12	.	.	.	.	.	.	.	.	.	.	.	.	.	
VS ChG 27/1	.	.	.	.	.	.	.	.	0.036	.	0.125	.	.	
Y 4510058B-18	0.0021	0.024	.	.	.	.	.	.	.	.	.	.	.	
~~Y 4510058C-18~~	~~0.0021~~	~~0.024~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	~~.~~	
Y 4510058D-18	0.0021	0.024	.	.	.	.	.	.	.	.	.	.	.	
Y 4510058E-18	0.0021	0.024	.	.	.	.	.	.	.	.	.	.	last	
CZ SPL17 31A	.	(0.0004)	.	.	.	.	.	.	.	.	(0.003)	(0.005)	.	
CZ SPL17 34A	.	0.0076	(0.005)	.	.	.	0.014	(0.006)	0.007	.	0.051	0.016	Zn:0.007	
CZ 20034 15c	(0.003)	0.0057	0.008	.	.	.	.	.	0.056	.	0.006	0.004	.	
CZ SPL17 32A	.	(0.0005)	(0.007)	.	.	.	.	0.022	0.023	.	(0.012)	(0.008)	Zn:0.011	
CZ SPL17 40A	.	0.0008	.	.	.	.	.	.	.	.	(0.004)	.	Zn:(0.002)	
VS ChG 28	.	.	.	.	.	.	.	.	0.015	.	0.0017	.	.	
VS ChG 28/1	.	.	.	.	.	.	.	.	.	.	0.0017	.	.	

Number	As	B	Bi	Ca	Fe	La	Nb	Pb	Sb	Se	Sn	W	Zr	Other
~~CZ 02033 1f~~	~~.~~	~~0.0043~~	~~(0.001)~~	~~.~~	~~.~~	~~.~~	~~.~~	~~0.009~~	~~.~~	~~.~~	~~0.030~~	~~0.022~~	~~(0.008)~~	
CZ 20034 13c	(0.002)	.	.	.	.	.	.	.	(0.002)	.	0.014	(0.003)	(0.02)	
CZ 20034 14c	0.035	0.0123	.	.	.	.	.	.	0.020	.	0.025	(0.003)	0.013	Zn: 0.010
CZ 20034 13a	(0.002)	.	.	.	.	.	.	.	(0.002)	.	0.014	(0.003)	0.029	
CZ 20034 13b	(0.002)	.	.	.	.	.	.	.	(0.002)	.	0.014	(0.003)	0.023	
BS CC-11A	0.0018	0.0008	(0.005)	(0.0009)	93.6	(0.004)	(0.007)	(0.002)	(0.01)	Zn:0.0032	(0.004)	(0.017)	(0.0025)	**17034**
VS ChM5/1	.	.	.	.	.	.	.	.	.	.	.	.	.	
SCRM 667/13	.	.	.	.	.	.	.	.	.	.	.	.	.	
VS ChG 24/1	.	.	.	.	.	.	.	.	0.011	.	0.081	.	.	
VS ChM6/1	.	.	.	.	.	.	.	.	.	.	.	.	.	
CZ SPL17 36A	.	0.022	(0.007)	.	.	.	.	0.016	.	.	(0.002)	.	Zn:(0.002)	
BS CC-11B	0.0074	0.0033	(0.016)	(0.002)	93.2	(0.008)	0.043	0.014	0.026	Zn:0.008	0.021	0.028	0.0165	**17034**
VS ChM13	.	.	.	.	.	.	.	.	.	.	.	.	.	
VS ChG 26/1	.	.	.	.	.	.	.	.	0.0055	.	0.034	.	.	
SCRM 669/14	.	.	.	.	.	.	.	.	.	.	.	.	.	
VS ChG 26	.	.	.	.	.	.	.	.	.	.	0.031	.	.	
VS ChM10	.	.	.	.	.	.	.	.	.	.	.	.	.	
SRM C1137a	.	.	.	.	.	.	.	.	.	.	.	.	.	
CZ SPL17 33A	.	0.0064	(0.002)	.	.	.	0.032	0.010	0.019	.	0.039	0.079	Zn:0.009	last of stock
SRM C2424	.	(0.002)	.	.	.	0.0011	.	.	.	.	.	.	.	
VS ChM9	.	.	.	.	.	.	.	.	.	.	.	.	.	
VS ChM11	.	.	.	.	.	.	.	.	.	.	.	.	.	
Y 2863-7	(0.021)	0.100	.	.	.	.	0.041	(0.0025)	(0.010)	.	(0.0073)	.	.	

BS: 28-35 mm Ø x 17-35 mm
CZ: 40 mm Ø x 18 mm
SCRM: 48 mm x 42 mm x 12 mm
SRM: 32 mm Ø x 19 mm
Y: 30-35 mm Ø x 18-30 mm
VS ChM: ~39 mm Ø x ~39 mm
VS ChG: ~34 mm x ~35 mm X ~22 mm

RM CAST IRON WITH YOUR CHOICE OF MAGNESIUM LEVELS

each unit: 2 pcs mushroom 43 mm Ø x 5 mm

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mg	Al	Ce	Co	Sn	Ti	V	Zn	Other
CTIF 6134	3.70	0.25	0.030	<0.01	1.60	0.020	2.00	0.040	*	.	<0.03	.	.	.	.	.	
CTIF 8532	3.7	0.288	0.05	.	2.6	0.0443	0.888	0.04	*	.	<0.025	.	0.0303	0.02	0.07	.	
CTIF 6135	3.6	0.38	0.0130	(0.003)	0.9	0.0219	1.98	0.04	*	(0.006)	.	0.037	.	0.007	0.0155	.	
CTIF 4500	3.38	0.60	0.059	(0.002)	1.97	.	1.45	0.014	*	0.033	0.023	0.065	.	.	.	.	
CTIF 5781	3.35	0.26	0.030	(0.0025)	2.50	0.0061	0.83	0.040	*	.	.	(0.004)	.	0.0208	0.0150	.	
CTIF 4497	3.12	0.605	0.043	(<0.002)	2.66	0.048	1.90	0.040	*	.	.	.	0.094	0.031	0.44	.	
CTIF 7160	3.1	0.57	0.05	(0.001)	2.4	0.08	1.0	(0.1)	*	(0.02)	0.02	0.09	.	0.013	0.018	.	As: 0.009
CTIF 5037	3.04	0.76	0.043	(0.0025)	3.40	.	0.64	0.014	*	.	.	.	.	0.029	.	.	
CTIF 3601B	3.0	0.35	0.037	(0.005)	2.1	0.019	1.08	0.029	*	.	<0.01	.	.	0.016	(0.005)	<0.05	Pb:(<0.002)
CTIF 8018	3.0	0.7	0.07	(0.0015)	3.0	0.08	0.127	0.09	*	0.02	(<0.02)	.	0.07	0.06	0.39	.	Sb:(0.01)
CTIF 6736	2.8	0.65	0.012	(0.002)	1.6	0.0258	1.7	0.03	*	.	.	.	.	0.008	(0.03)	.	
CTIF 5783	2.55	0.2	0.0266	(0.003)	2.3	0.110	1.23	0.05	*	.	.	0.0074	.	0.015	0.0127	.	As: 0.0016

Magnesium level available in the below samples. X = available

For Mg Range	Order Suffix	3601B	4497	4500	5037	5781	5783	6134	6135	6736	7160	8018	8532
<0.005	<0.005	X	.	.	.	X	X	.	.	.	.	X	X
0.005 - 0.009	0.005	X	.	.	X	X	X	.	.	X	.	X	.
0.010 - 0.014	0.01	.	.	.	X	X	X	.	.	X	X	X	.
0.015 - 0.024	0.02	X	.	.	X	X	X	.	X	X	X	X	.
0.025 - 0.034	0.03	.	.	.	X	.	X	.	X	X	X	X	.
0.035 - 0.044	0.04	.	.	.	X	.	X	.	X	X	X	X	.
0.045 - 0.054	0.05	.	.	.	X	.	X	.	X	X	X	X	.
0.055 - 0.064	0.06	.	X	.	.	.	X	.	X	X	X	X	.
0.065 - 0.074	0.07	.	X	X	.	.	X	.	X	X	X	X	.
0.075 - 0.084	0.08	.	.	X	.	.	.	X	X	X	X	X	.
0.085 - 0.094	0.09	.	X	X	.	.	.	X	X	X	X	X	.
0.095 - 0.104	0.10	.	.	.	.	.	.	X	X	X	X	X	.
0.105 - 0.114	0.11	.	.	.	.	.	.	X	X	X	X	X	.
0.115 - 0.124	0.12	.	.	.	.	.	.	X	X	X	X	X	.
0.125 - 0.134	0.13	.	.	.	.	.	.	X	.	X	X	.	.
0.135 - 0.144	0.14	.	.	.	.	.	.	X	.	.	X	.	.
0.145 - 0.154	0.15	.	.	.	.	.	.	.	.	.	X	.	.
0.155 - 0.164	0.16	.	.	.	.	.	.	.	.	.	X	.	.
0.165 - 0.174	0.17	.	.	.	.	.	.	.	.	.	X	.	.
0.175 - 0.184	0.18	.	.	.	.	.	.	.	.	.	.	.	.

The above cast iron samples can be ordered with your choice of Magnesium. Examples:
to order CTIF 6736 with Mg 0.035 - 0.044 then order as part number CTIF 6736 0.04
to order CTIF 8018 with 0.08 % Mg, order as part number CTIF 8018 0.08

CRM WHITE IRON

analysis listed in mass %

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Co	Mo	Nb	Ti	V	
BS WI-2	3.61	0.80	0.22	0.056	0.52	0.0124	0.254	0.229	0.0118	0.219	0.128	0.089	0.215	**17025**
SRM C1145	2.92	0.187	0.215	0.191	0.271	0.46	0.62	0.63	0.058	0.48	.	0.012	0.112	
VS ChG 10/6	(2.7)	0.86	0.103	0.0072	2.86	.	.	(0.2)	.	.	.	.	(0.3)	
VS ChG 11/6	(2.7)	0.312	0.23	0.039	1.79	.	.	(0.2)	.	.	.	.	(0.3)	
VS ChG 9/6	(2.7)	0.155	0.38	0.071	0.80	.	.	(0.2)	.	.	.	.	(0.3)	
BS WI-1	1.75	0.24	0.051	0.114	1.90	0.027	0.053	0.048	0.0074	0.0103	0.027	0.020	0.008	**17025**

Number	Al	As	B	Bi	Ca	Fe	Mg	Pb	Sb	Sn	W	Zr	Units
BS WI-2	0.0192	0.0016	0.0008	.	(0.00013)	[93.6]	(0.0002)	0.013	0.023	0.0042	0.023	0.0045	~35 mm Ø x ~30 mm
SRM C1145	(0.04)	(0.03)	(0.02)	(<0.01)	.	.	.	0.0012	(0.04)	(0.10)	.	(0.002)	32 mm Ø x 19 mm
VS ChG 10/6	.	(0.003-0.006)	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~40 mm
VS ChG 11/6	.	(0.003-0.006)	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~40 mm
VS ChG 9/6	.	(0.003-0.006)	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~40 mm
BS WI-1	0.075	0.0067	0.0032	.	0.0005	[95.5]	0.0009	0.115	.	0.0081	0.185	0.0034	~35 mm Ø x ~30 mm

CAST IRON

= Class, where 1 = CRM and 2 = RM

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Ce	La	Mg	Se	Te
1	MBH-FEPIGH-21	4.42	0.127	0.050	0.141	1.60	0.0113	0.040	0.088	0.20	0.018	.	.	.	.	.
1	NCS AH11112	3.95	0.511	0.055	0.014	2.30	0.487	0.141	0.251	0.014	.	.	.	0.032	.	.
1	NCS HS11799	3.95	0.511	0.055	0.014	2.30	0.487	0.141	0.251	0.014	.	0.012	0.0064	0.032	.	.
2	CZ SPL22 47A	3.82	0.084	0.137	0.011	1.07	0.82	0.606	0.016	0.024	(0.002)	0.010	.	0.035	.	.
1	VS ChG 56	(3.8)	(0.2)	(0.8)	(0.01)	(0.5)	(0.4)	(0.1)	(0.1)	(0.01)	(0.005)	.	.	.	.	.
1	VS ChG 57	(3.8)	(0.2)	1.17	(0.03)	(0.6)	(0.3)	(0.3)	(0.4)	(0.06)	(0.01)	.	.	.	.	.
1	NCS HS11798	3.78	0.606	0.053	0.020	2.73	0.526	0.856	0.700	0.042	.	0.0097	0.0042	(0.034)	.	.
1	NCS HS92745A	3.67	0.443	0.068	0.049	1.49	0.363	0.341	0.482	.	.	.	.	.	.	.
1	SCRM 660/11	3.62	0.444	0.137	0.115	1.74	.	.	.	.	.	.	.	.	.	.
2	CZ SPL22 46A	3.66	0.098	0.109	0.010	1.42	0.86	0.628	0.014	0.026	.	0.005	.	0.047	.	.
2	CZ SPL22 48A	3.63	0.338	0.025	0.006	2.15	0.407	0.043	0.128	0.021	0.025	0.009	.	0.019	.	.
1	NCS HS92744c	3.59	0.435	0.047	0.020	1.68	0.268	0.595	0.526	.	.	0.022	.	0.042	.	.
1	NCS HS92746a	3.59	0.226	0.046	0.012	2.25	0.263	0.501	0.097	0.014	.	.	.	0.029	.	.
2	CZ SPL22 53A	3.56	0.052	0.053	0.0097	1.60	1.357	0.687	0.071	0.047	0.032	0.023	.	0.032	.	.
2	CZ SPL22 51A	3.46	0.405	0.147	0.004	1.63	0.152	0.111	0.075	0.006	0.035	.	.	.	.	.
1	VS ChG 48	3.44	0.100	0.0070	0.0039	0.923	0.90	1.15	0.032	0.049	0.044	.	.	0.072	.	.
2	CZ SPL22 50A	3.39	0.529	0.179	0.055	2.14	0.151	0.113	0.137	0.004	0.029	.	.	.	.	.
2	CZ SPL22 45A	3.33	0.778	0.031	0.010	2.83	0.008	0.405	0.058	0.078	0.031	0.032	.	0.066	.	.
1	MBH FEPIGM-21	3.22	0.077	0.051	0.053	0.71	0.0117	0.028	0.057	0.060	0.015	.	.	.	.	.
2	CZ SPL22 44A	3.20	0.711	0.033	0.005	2.51	0.018	0.521	0.063	0.046	0.024	0.005	.	0.015	.	.
1	NCS AH11353	3.15	0.47	0.020	0.0006	2.30	0.029	0.59	0.025	0.023	0.015	.	.	0.029	.	.
2	CZ SPL22 49A	3.12	0.328	0.038	0.009	2.06	0.384	0.132	0.300	0.064	0.094	(0.005)	.	0.007	.	.
1	SCRM 658/13	3.106	0.563	0.259	0.0547	1.973	.	.	.	.	.	.	.	.	.	.
2	CZ SPL22 52A	3.03	0.301	0.021	0.0094	2.38	0.607	0.021	0.025	0.011	0.010	0.012	.	0.008	.	.
1	**BS CC-23**	2.96	0.73	0.53	0.082	0.43	0.307	0.56	0.467	0.060	0.090	(0.0006)	(0.0008)	(0.0006)	.	(0.03)
1	11X C1-22	2.78	1.28	0.098	0.048	1.41	0.179	0.588	0.293	0.0131	0.086	.	.	.	(0.003)	.
1	MBH FePIGL-21	1.69	0.218	0.052	0.004	0.335	0.0041	0.014	0.0209	0.0154	0.0114	.	.	.	.	.
2	MBH FePIGL-RM	1.6	0.17	0.051	0.004	0.12	0.003	0.013	0.017	0.004	0.011	no uncertainties			.	.

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Ce	La	Mg	Se	Te

Number	As	B	Bi	Fe	Mo	Nb	Pb	Sb	Sn	Ti	V	W	Zn	Zr	Units in mm
MBH-FEPIGH-21	0.0015	.	.	.	0.027	0.019	.	.	0.0075	0.42	0.108	(0.004)	.	0.0039	~40 Ø x ~15
NCS AH11112	.	.	.	.	0.474	.	.	.	0.055	0.117	0.312	.	.	.	31 Ø x 30
NCS HS11799	.	.	.	.	0.474	.	.	.	0.055	0.117	0.312	.	.	.	31 Ø x 30
CZ SPL22 47A	.	(0.0005)	.	.	(0.002)	.	0.012	0.026	0.016	0.027	0.007	0.004	0.027	(0.010)	40 Ø x 18
VS ChG 56	0.18	(0.001)	.	.	(0.01)	(0.002)	.	0.014	.	(0.06)	(0.02)	(0.004)	.	.	~37 Ø x ~17
VS ChG 57	0.095	(0.002)	.	.	(0.01)	(0.004)	.	(0.001)	(0.01)	(0.08)	(0.04)	(0.01)	.	.	~37 Ø x ~17
NCS HS11798	.	.	.	.	0.359	.	.	0.025	0.032	0.117	0.018	.	.	.	31 Ø x 30
NCS HS92745A	0.010	0.042	.	.	0.223	.	.	0.221	.	0.035	0.114	.	.	.	30 Ø x 30
SCRM 660/11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	48 x 42 x 12
CZ SPL22 46A	(0.003)	0.0021	0.005	.	0.011	(0.012)	0.021	0.024	0.014	0.046	0.008	0.008	0.018	(0.004)	40 Ø x 18
CZ SPL22 48A	(0.021)	0.0045	.	.	0.482	.	0.015	.	0.010	0.030	0.016	.	.	.	40 Ø x 18
NCS HS92744c	0.0021	0.024	.	.	0.180	.	.	.	.	0.044	0.174	.	.	.	35 Ø x 30
NCS HS92746a	(0.003)	0.0086	.	.	0.214	.	.	.	.	0.040	0.033	.	.	.	35 Ø x 30
CZ SPL22 53A	(0.004)	0.0046	(0.007)	.	0.002	.	.	0.066	0.007	0.035	0.013	0.010	(0.004)	.	40 Ø x 18
CZ SPL22 51A	(0.007)	.	(0.008)	.	0.037	.	0.006	0.012	0.072	0.033	0.017	(0.005)	(0.002)	.	40 Ø x 18
VS ChG 48	0.0021	.	.	.	0.591	.	.	0.0017	0.0018	0.0022	0.0016	.	.	.	~35 Ø x ~17
CZ SPL22 50A	.	(0.0008)	0.011	.	0.045	.	0.004	0.011	0.068	0.030	0.015	(0.006)	.	.	40 Ø x 18
CZ SPL22 45A	.	0.022	.	.	0.182	.	0.005	.	0.034	0.079	0.022	0.015	.	(0.015)	40 Ø x 18
MBH FEPIGM-21	(0.0018)	.	.	.	0.0157	0.014	.	.	0.0061	0.258	0.071	(0.003)	.	0.0022	~40 Ø x ~15
CZ SPL22 44A	.	0.0037	0.009	.	0.174	(0.014)	0.017	0.018	0.026	0.084	0.014	0.018	0.009	(0.007)	40 Ø x 18
NCS AH11353	0.008	0.004	.	.	0.002	N:0.003	.	0.0005	0.003	0.027	0.032	0.003	.	.	30 Ø x 25
CZ SPL22 49A	0.020	0.0075	.	.	0.475	(0.005)	0.008	(0.007)	0.011	0.024	0.081	0.013	(0.003)	.	40 Ø x 18
SCRM 658/13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	48 x 42 x 12
CZ SPL22 52A	0.041	0.0082	0.011	.	0.621	(0.003)	(0.003)	0.014	0.032	0.029	0.023	(0.004)	0.004	0.015	40 Ø x 18
BS CC-23	0.016	0.067	.	(92.8)	0.267	(0.002)	0.008	0.17	0.052	0.091	0.195	(0.002)	17025	0.057	~32 Ø x ~17 **17034**
11X C1-22	0.0145	0.031	0.0048	N:0.013	0.034	0.080	(0.003)	0.048	0.049	0.103	0.142	0.104	.	0.0028	disc
MBH FePIGL-21	.	.	.	.	0.0023	0.007	.	.	0.0028	0.0048	0.0184	0.0015	.	.	disc
MBH FePIGL-RM	.	.	.	.	0.003	.	.	.	.	0.002	0.015	.	.	.	disc

Number	As	B	Bi	Fe	Mo	Nb	Pb	Sb	Sn	Ti	V	W	Zn	Zr	Units in mm

CAST IRON WITH C > 2.75%

CONTINUED ON THE NEXT PAGE

= Class, 1 = CRM and 2 = RM

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	Nb	Sn	Ti	V	Zn
2	CZ SPL17 35A	4.55	0.096	0.024	0.011	0.078	0.004	0.024	0.022	(0.002)	0.023	0.003	.	(0.002)	(0.002)	0.009	.
2	MBH FEPIGH-RM	4.5	0.10	0.048	0.11	1.64	0.011	0.040	0.087	0.17	0.019	0.027	no uncertainties		0.41	0.12	.
1	CZ 02033 4e	4.45	0.034	0.023	0.006	0.090	0.005	0.049	0.030	(0.003)	0.033	0.002	.	(0.001)	0.011	0.015	.
1	CZ 02033 4d	4.19	0.112	0.050	0.041	0.259	0.084	0.063	0.056	0.007	(0.003)	0.024	.	(0.001)	0.009	0.012	0.009
1	SCRM 659/9	4.174	1.010	0.0215	0.0372	1.361	.	.	.	.	.	.	.	.	.	.	.
1	Y 2582-7	4.13	2.06	0.306	0.111	1.85	.	0.026	0.157	.	.	.	.	.	0.399	0.821	.
1	DSZU CH04	4.01	1.77	0.074	0.018	0.73	0.55	0.273	0.100	0.014	(0.05)	(0.004)	(0.005)	(0.002)	0.025	(0.004)	.
1	DSZU CH05	3.99	2.23	0.119	0.039	0.46	0.61	0.85	1.63	(0.002)	(0.07)	0.109	(0.3)	(0.01)	0.070	0.200	.
1	DSZU CH06	3.88	0.85	0.050	0.050	0.28	1.03	1.23	(2.8)	0.025	(0.07)	0.29	(0.05)	(0.03)	0.33	0.205	.
1	CZ 20034 16c	3.87	1.311	0.173	0.0243	0.95	0.345	0.376	0.332	0.004	0.006	0.195	.	0.125	0.057	0.027	0.017
1	CZ 20034 16a	3.80	1.292	0.171	0.0266	1.00	0.332	0.390	0.374	0.007	0.010	0.203	.	0.125	0.0763	0.021	0.019
1	11X C6W	3.80	0.967	0.088	0.064	0.81	0.952	0.072	0.396	0.021	0.046	1.32	0.010	0.030	0.195	0.045	0.0045
1	CZ 20034 16b	3.78	1.327	0.170	0.0236	1.00	0.332	0.388	0.378	0.007	0.010	0.202	.	0.121	0.070	0.029	0.020
1	VS ChG 32	3.74	1.90	0.061	0.018	0.60	0.171	.	0.031	.	.	0.113	.	0.060	0.040	0.294	.
1	SCRM 674/1	3.71	1.437	0.0180	0.078	0.484	.	0.161	0.0296	0.0061	0.0066	0.0497	.	0.0164	0.0131	0.0125	.
1	Y 2582-4	3.70	0.857	0.087	0.076	0.451	.	0.032	0.117	.	.	(0.031)	.	.	0.030	0.158	.
2	CZ SPL17 39A	3.70	0.812	0.160	0.045	1.90	0.298	0.032	0.488	0.008	(0.002)	0.203	.	(0.003)	(0.074)	0.232	0.035
1	Y 2582-5	3.67	0.596	0.072	0.117	0.183	.	0.502	0.171	.	.	(0.68)	.	.	0.066	0.335	.
1	CZ 02033 7b	3.61	0.304	0.021	0.020	1.82	0.036	1.28	0.536	0.022	0.050	0.96	.	.	0.015	0.007	.
1	CZ 02033 7c	3.55	0.389	0.028	0.026	1.73	0.016	1.26	0.542	0.040	0.048	0.966	.	(0.004)	0.026	0.067	.
1	DSZU CH03	3.54	0.40	0.023	0.034	0.57	0.194	0.187	0.612	0.035	(0.05)	(0.019)	(0.010)	(0.004)	0.059	0.009	.
1	VS ChG 3/9	3.54	0.387	0.037	0.053	0.516	0.123	.	0.100	.	.	.	.	.	0.125	0.096	.
1	VS ChG 27	3.53	1.21	0.044	0.029	1.82	0.348	0.022	0.162	0.008	.	0.147	.	0.115	0.056	0.160	.
1	11X HPC4Q	3.48	1.19	1.63	0.102	1.70	0.078	2.03	0.788	.	.	0.101	.	.	.	0.029	.
1	Y 2863-5	3.47	0.78	0.564	0.070	0.89	0.365	0.62	1.53	.	.	0.67	.	.	0.133	0.129	.
1	11X C3AD	3.45	0.896	0.539	0.180	1.06	0.351	4.34	1.669	0.0104	0.240	0.235	0.021	0.166	0.127	0.605	0.007
1	CZ SPL17 41A	3.41	0.512	0.199	0.068	1.92	0.151	0.104	0.125	(0.003)	0.031	0.041	.	0.066	0.048	0.011	(0.001)
1	VS ChL1/1	3.39	0.53	0.048	0.029	1.32	0.344	0.410	0.264	.	0.017	0.036	.	.	0.061	0.073	.
2	CZ SPL17 38A	3.39	0.401	0.067	0.036	2.37	0.510	0.306	0.141	0.034	0.021	0.101	0.008	0.032	0.012	0.061	0.028
1	VS ChG 35	3.34	1.23	0.102	0.021	0.617	0.090	2.15	0.233	.	.	0.027	.	.	0.022	0.043	.
1	KUT 120	3.34	0.59	0.059	0.18	1.84	.	.	.	.	.	.	.	.	.	.	.
1	Y 2863-3	3.32	1.27	0.115	0.049	2.27	0.62	2.01	0.49	.	.	0.313	.	.	0.176	0.45	.
1	KUT 121	3.32	0.61	0.135	0.17	(1.86)	.	.	.	.	.	.	.	.	.	.	.
1	KUT 205	3.32	0.80	0.025	(0.010)	1.88	0.81	0.61	0.64	.	.	1.79	.	(0.035)	.	.	.
1	KUT 206	3.32	0.75	0.027	(0.010)	1.84	1.01	0.21	0.12	.	.	2.14	.	(0.107)	.	.	.
1	KUT 122	3.31	0.61	0.22	0.20	1.72	.	.	.	.	.	.	.	.	.	.	.
1	KUT 123	3.30	0.69	0.31	0.074	(1.87)	.	.	.	.	.	.	.	.	.	.	.
1	NCS HS11784	3.30	0.528	0.78	0.031	2.68	0.015	0.024	0.812	(0.0012)	.	0.142	(0.0012)	0.0005	0.084	0.020	.
1	Y 2582-3	3.29	1.22	0.045	0.056	0.689	.	0.046	0.030	.	.	.	.	.	0.043	0.071	.
1	VS ChG 4/9	3.24	1.42	0.030	0.024	0.455	0.199	.	0.155	.	.	.	.	.	0.10	0.169	.
1	11X HPC3K	3.24	1.00	2.52	0.078	1.37	0.132	1.52	1.19	.	.	0.172	.	.	.	0.042	.
2	BAS NCRM3	3.24	0.67	0.125	0.090	0.29	1.21	3.64	3.95	.	.	0.78	.	.	.	0.02	.
1	NCS HS11782	3.21	1.09	0.088	0.035	1.64	0.042	0.014	0.061	.	.	0.0048	.	.	0.027	0.0079	.
1	KUT 125	3.20	0.73	0.70	0.019	(1.87)	.	.	.	.	.	.	.	.	.	.	.
2	MBH FEPIGM-RM	3.2	0.066	0.045	0.064	0.69	0.008	0.029	0.057	0.060	0.016	0.014	no uncertainties		0.25	0.081	.
1	NCS HS11785	3.19	0.482	0.79	0.030	2.52	0.021	0.031	0.817	(0.0030)	.	0.139	(0.0009)	0.0010	0.076	0.018	.
1	DSZU CH02	3.18	1.09	0.007	0.0116	1.35	0.038	0.658	0.59	0.026	(0.06)	0.224	(0.4)	(0.014)	0.161	(0.005)	.
1	11X C2V	3.17	1.23	0.256	0.077	1.180	0.191	1.803	1.126	0.104	0.116	0.116	0.0160	0.0627	0.0870	0.328	0.0115
1	VS ChM 12	3.17	1.00	0.030	0.007	3.10	0.062	1.65	0.039	0.050	.	.	.	.	0.013	0.0027	.
1	SCRM 671/1	3.165	0.811	0.108	0.0503	0.868	.	0.0627	0.0609	0.030	0.098	0.0259	.	0.0103	0.0407	0.0122	.

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	Nb	Sn	Ti	V	Zn
1	KUT 126	3.16	0.81	1.41	0.016	1.90	.	.	.	.	.	.	.	.	.	.	.
1	KUT 202	3.16	0.81	0.024	(0.010)	1.77	0.24	2.07	2.36	.	.	0.44	.	(0.21)	.	.	.
1	SCRM 657/9	3.157	0.112	0.101	0.0401	3.209	.	.	.	.	.	.	.	.	.	.	.
1	KUT 204	3.15	0.80	0.023	(0.009)	1.79	0.64	1.09	1.22	.	.	1.38	.	(0.215)	.	.	.
1	KUT 127	3.14	0.79	1.55	0.014	1.81	.	.	.	.	.	.	.	.	.	.	.
1	CZ 02033 6c	3.11	1.25	0.097	0.019	3.25	0.273	0.021	1.33	0.024	0.005	0.006	.	0.131	0.107	0.192	.
2	CZ SPL17 37A	3.07	0.211	0.025	0.023	3.30	0.149	0.106	0.328	0.039	0.031	0.325	.	0.073	0.008	0.122	(0.001)
1	VS ChG 30	3.06	2.10	0.090	0.035	1.97	0.576	.	0.24	.	.	0.0061	.	0.015	0.012	0.0074	.
2	BAS NCRM1	3.05	1.22	0.300	0.156	0.95	2.17	0.57	0.55	.	.	1.02	.	.	.	0.03	.
1	VS ChL3/1	3.04	0.250	0.067	0.024	2.39	0.60	1.08	0.533	.	0.016	0.262	.	.	0.043	0.103	.
1	11X C9E	3.03	1.87	0.045	0.020	1.39	0.433	2.66	1.48	0.072	0.169	0.166	0.077	0.047	0.116	0.437	0.0091
1	DSZU CH08	3.02	0.79	0.056	0.058	2.05	1.60	2.52	2.13	0.29	(0.07)	0.96	(0.3)	(0.008)	0.315	0.34	.
1	VS ChG 39	3.01	0.82	0.304	0.088	1.45	0.414	1.09	1.08	.	.	0.113	.	.	0.168	0.274	.
2	BAS LARM2	(3.0)	(0.3)	(0.05)	(<0.01)	(2.0)	.	.	2.50	0.066	.	0.22	.	0.22	0.33	.	.
2	BAS LARM4	(3.0)	(0.3)	(0.05)	(<0.01)	(2.0)	0.26	.	1.19	0.014	.	1.00	.	0.11	0.17	.	.
2	BAS LARM1	(3.0)	(0.3)	(0.05)	(<0.01)	(2.0)	2.49	0.49	0.50	.	.	.	.	.	0.14	0.11	.
2	BAS LARM5	(3.0)	(0.3)	(0.05)	(<0.01)	(2.0)	.	2.46	.	.	.	0.62	.	0.025	.	0.24	.
2	BAS LARM3	(3.0)	(0.3)	(0.05)	(<0.01)	(2.0)	1.20	1.80	.	0.042	.	.	.	.	.	0.55	.
1	Y 2863-4	2.99	0.93	0.310	0.059	1.54	0.97	0.93	0.76	.	.	0.61	.	.	0.090	0.082	.
2	BAS LARM5/1	2.98	0.33	0.049	0.012	2.02	.	2.56	.	.	.	0.58	.	0.023	.	0.23	.
2	BAS NCRM2	2.97	0.95	0.068	0.119	1.82	1.67	2.10	1.99	.	.	0.36	.	.	.	0.16	.
1	KUT 124	2.97	0.62	0.50	0.051	1.63	.	.	.	.	.	.	.	.	.	.	.
1	CZ 02033 6b	2.95	1.15	0.095	0.020	3.23	0.272	0.026	1.36	0.007	.	0.005	.	0.140	0.068	0.083	.
1	SCRM 662/4	2.95	0.76	0.30	0.087	2.33	.	.	(1)	.	.	.	.	.	.	.	.
1	VS ChG 36	2.94	0.454	0.232	0.036	1.50	0.70	0.542	0.476	.	.	0.406	.	.	0.027	0.086	.
1	CZ 20034 12b	2.92	1.047	0.484	0.077	2.96	0.223	0.174	0.638	0.077	0.008	0.117	.	0.042	0.071	0.326	0.004
1	SRM C1145a	2.92	0.187	0.215	0.191	0.271	0.46	0.62	0.63	(0.04)	0.058	0.48	.	(0.10)	0.012	0.112	.
1	VS ChG 34	2.87	0.54	0.230	0.086	1.20	0.140	.	1.22	.	.	0.201	.	0.29	0.030	0.115	.
1	CZ 20034 12a	2.82	0.996	0.480	0.073	2.57	0.160	0.174	0.640	0.077	0.004	0.114	.	0.041	0.085	0.340	(0.003)
1	NCS HS11786	2.82	0.768	1.70	0.064	2.05	0.044	0.048	1.98	(0.0094)	.	0.251	0.012	0.0062	0.102	0.029	.
1	11X C5Y	2.78	0.754	0.092	0.092	1.913	0.443	1.186	0.950	0.060	0.0495	0.54	0.020	0.0357	0.0934	0.0739	0.0107
1	KUT 201	2.77	0.74	0.024	(0.009)	1.71	0.10	2.47	2.90	.	.	0.13	.	(0.31)	.	.	.

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	Nb	Sn	Ti	V	Zn

CAST IRON WITH C > 2.75% **CONTINUED FROM THE PREVIOUS PAGE** analysis in mass % except * = mg/kg

Number	As	B	Bi	Ca*	Ce	La	Mg	N	Pb	Sb	Se	Te	W	Zr	Units
CZ SPL17 35A	.	(0.0002)	.	.	.	.	.	.	(0.002)	.	.	.	(0.005)	.	40 mm Ø x 18 mm last
MBH FEPIGH-RM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø ~15 mm
CZ 02033 4e	.	.	(0.002)	.	.	.	.	.	.	(0.002)	.	.	.	.	40 mm Ø x 18 mm
CZ 02033 4d	(0.012)	(0.0001)	(0.002)	.	.	.	.	.	.	0.007	.	.	.	.	40 mm Ø x 18 mm
SCRM 659/9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm
Y 2582-7	0.043	.	.	.	.	.	.	.	.	.	.	.	.	.	30 mm Ø x 18-30 mm
DSZU CH04	.	(0.0007)	.	(7)	.	.	(0.0001)	.	(0.007)	.	.	.	(<0.0002)	.	~30 mm x ~35 mm x ~19mm
DSZU CH05	.	(0.03)	.	(20)	.	.	(0.001)	.	.	.	.	.	.	.	~30 mm x ~35 mm x ~19mm
DSZU CH06	.	(0.02)	.	(10)	.	.	.	.	.	.	.	.	0.1	.	~35 mm x ~35 mm x ~19mm
CZ 20034 16c	(0.003)	0.020	.	.	.	.	.	.	0.015	0.010	.	.	0.015	(0.002)	40 mm Ø x 18 mm
CZ 20034 16a	0.005	0.018	.	.	.	.	.	.	0.006	0.011	.	.	0.019	(0.002)	40 mm Ø x 18 mm
11X C6W	0.0544	0.0043	0.007	Cd:(0.0003)		Ag:0.0042	.	0.0070	0.007	0.058	0.006	0.013	0.0242	.	~40 mm Ø x ~15 mm
CZ 20034 16b	0.005	0.018	.	.	.	.	.	.	0.007	0.011	.	.	0.019	(0.002)	40 mm Ø x 18 mm
VS ChG 32	.	.	0.361	.	.	.	.	.	.	.	.	.	.	.	~37 mm x ~37 mm x ~24 mm
SCRM 674/1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm x 37 mm x 10 mm
Y 2582-4	0.0017	.	.	.	.	.	.	.	.	.	.	.	.	.	30 mm Ø x 18-30 mm
CZ SPL17 39A	.	0.0195	0.008	.	.	.	.	.	0.017	0.037	.	.	.	.	40 mm Ø x 18 mm
Y 2582-5	0.0022	.	.	.	.	.	.	.	.	.	.	.	.	.	30 mm Ø x 18-30 mm
CZ 02033 7b	.	.	.	.	.	.	.	.	.	.	.	.	0.045	.	40 mm Ø x 18 mm
CZ 02033 7c	.	0.0008	(0.002)	.	.	.	.	.	.	.	.	(0.006)	0.037	.	40 mm Ø x 18 mm
DSZU CH03	(0.004)	(0.001)	.	(20)	.	.	(0.0001)	.	(0.01)	.	.	.	(0.006)	.	~30 mm x ~35 mm x ~16mm
VS ChG 3/9	(0.003)	.	.	.	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~40 mm last
VS ChG 27	.	.	.	.	.	.	.	.	.	0.029	.	.	.	.	~35 mm x ~35 mm x ~22 mm
11X HPC4Q	.	.	.	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm
Y 2863-5	.	0.060	.	.	.	.	.	.	.	.	.	.	0.158	.	30 mm Ø x 18-30 mm
11X C3AD	0.086	0.0253	0.0124	.	.	.	.	0.0075	0.0170	0.243	0.028	.	0.040	.	~40 mm Ø x ~15 mm
CZ SPL17 41A	.	(0.0004)	(0.007)	.	.	.	.	.	0.010	0.016	.	.	0.012	.	40 mm Ø x 18 mm last
VS ChL1/1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~38 mm
CZ SPL17 38A	.	0.0027	(0.002)	.	.	.	.	.	(0.003)	0.018	.	.	(0.005)	.	40 mm Ø x 18 mm
VS ChG 35	.	.	.	.	.	.	.	.	.	.	.	.	.	.	~34 mm Ø x ~37 mm
KUT 120	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
Y 2863-3	.	0.056	.	.	.	.	.	.	.	.	.	.	.	.	30 mm Ø x 18-30 mm
KUT 121	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
KUT 205	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
KUT 206	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
KUT 122	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
KUT 123	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
NCS HS11784	0.0041	.	0.0083	.	.	.	.	.	0.0002	0.0007	.	.	.	.	31 mm Ø x 28 mm
Y 2582-3	0.009	.	.	.	.	.	.	.	.	.	.	.	.	.	30 mm Ø x 18-30 mm
VS ChG 4/9	(0.003)	.	.	.	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~40 mm
11X HPC3K	.	.	.	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm
BAS NCRM3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm x 37 mm x 10 mm
NCS HS11782	0.0065	.	.	.	.	.	.	.	.	.	.	.	.	.	31 mm Ø x 28 mm
KUT 125	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
MBH FEPIGM-RM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	~40 mm Ø ~15 mm
NCS HS11785	0.0049	.	0.013	.	.	.	.	.	0.0002	0.0005	.	.	.	.	31 mm Ø x 28 mm
DSZU CH02	.	(0.016)	.	(10)	.	.	(0.002)	.	.	.	.	.	.	.	~35 mm Ø x ~18 mm
11X C2V	0.0541	0.0098	0.0084	.	.	.	.	0.0096	0.0133	0.115	0.0157	.	0.0228	.	~40 mm Ø x ~15 mm
VS ChM 12	.	.	.	.	.	.	(0.08)	.	.	.	.	.	.	.	~38 mm Ø x ~38 mm
SCRM 671/1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm x 37 mm x 12 mm

Number	As	B	Bi	Ca*	Ce	La	Mg	N	Pb	Sb	Se	Te	W	Zr	Units
KUT 126	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
KUT 202	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
SCRM 657/9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm
KUT 204	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
KUT 127	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
CZ 02033 6c	.	0.0024	.	.	.	.	.	.	.	(0.003)	0.044	.	0.007	.	40 mm Ø x 18 mm
CZ SPL17 37A	.	0.0124	(0.002)	.	.	.	.	.	(0.002)	.	.	.	0.026	.	40 mm Ø x 18 mm
VS ChG 30	.	.	0.082	.	.	.	.	.	.	.	.	.	.	.	~37 mm x ~37 mm x ~24 mm
BAS NCRM1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm x 37 mm x 10 mm
VS ChL3/1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~38 mm
11X C9E	0.53	0.0047	.	.	.	.	.	.	(0.0023)	0.145	.	0.0097	0.31	(0.0017)	~40 mm Ø x ~15 mm
DSZU CH08	.	(0.08)	.	(10)	.	.	.	.	.	.	.	.	.	.	~35 mm x ~35 mm x ~19mm
VS ChG 39	.	.	.	.	.	.	.	.	.	.	.	.	.	.	~34 mm Ø x ~37 mm
BAS LARM2	0.044	.	.	.	0.008	.	.	.	0.007	.	.	.	.	.	40 mm x 37 mm x 10 mm
BAS LARM4	.	.	.	.	0.008	.	.	.	0.018	.	.	.	.	.	40 mm x 37 mm x 10 mm
BAS LARM1	.	0.006	0.011	.	0.005	.	.	.	.	.	.	.	.	.	40 mm x 37 mm x 10 mm
BAS LARM5	0.018	0.0012	0.0010	.	.	.	.	.	0.0005	.	.	.	.	.	40 mm x 37 mm x 10 mm last
BAS LARM3	0.092	0.003	0.022	.	.	.	.	.	.	.	.	.	.	.	40 mm x 37 mm x 10 mm
Y 2863-4	.	0.041	.	.	.	.	.	.	.	.	.	.	.	.	30 mm Ø x 18-30 mm
BAS LARM5/1	.	0.0016	0.0012	.	.	.	.	.	<0.001	.	.	.	.	.	40 mm x 37 mm x 10 mm
BAS NCRM2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm x 37 mm x 10 mm
KUT 124	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm
CZ 02033 6b	.	.	.	.	.	.	.	.	.	0.049	.	.	.	.	40 mm Ø x 18 mm
SCRM 662/4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm
VS ChG 36	.	.	.	.	.	.	.	.	.	.	.	.	.	.	~34 mm Ø x ~37 mm
CZ 20034 12b	0.024	0.047	0.006	.	.	.	.	.	0.009	0.046	.	.	0.007	(0.002)	40 mm Ø x 18 mm
SRM C1145a	(0.03)	(0.02)	.	.	.	.	.	.	0.0012	(0.04)	.	.	.	(0.002)	32 mm Ø x 19 mm
VS ChG 34	.	.	0.223	.	.	.	.	.	.	.	.	.	.	.	~37 mm x ~37 mm x ~24 mm
CZ 20034 12a	0.022	0.036	0.005	.	.	.	.	.	0.007	0.046	.	.	0.011	(0.002)	40 mm Ø x 18 mm
NCS HS11786	0.0075	.	0.015	.	.	.	.	.	0.0003	0.0008	.	.	.	.	31 mm Ø x 28 mm
11X C5Y	0.0203	0.0058	0.005	.	.	.	.	0.0094	0.0108	0.030	0.0072	(0.0022)	0.0072	(0.0024)	~40 mm Ø x ~15 mm
KUT 201	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30 x 30 x 13 mm

Number	As	B	Bi	Ca*	Ce	La	Mg	N	Pb	Sb	Se	Te	W	Zr	Units

CAST IRON WITH C < 2.75%

= Class, 1 = CRM and 2 = RM analysis in mass % except * = mg/kg

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	Nb	Sn	Ti	V	Zn
1	VS ChL4/1	2.69	1.37	0.054	0.027	1.99	0.161	0.725	0.92	.	0.017	0.116	.	.	0.11	0.258	.
1	SRM C1291	2.67	1.14	0.028	0.032	1.34	0.26	4.34	2.78	.	.	0.32	.	.	.	0.031	.
1	VS ChG 6/9	2.65	0.83	0.54	0.027	0.53	0.34	.	0.241	.	.	.	.	.	0.028	0.130	.
1	DSZU CH01	2.61	0.258	0.012	0.0045	1.95	0.097	0.072	0.88	0.079	(0.06)	0.070	(0.010)	(0.05)	0.132	0.134	.
1	VS ChG 40	2.59	1.56	0.059	0.019	1.60	0.98	1.61	1.47	.	.	0.229	.	.	0.18	0.325	.
1	11X C8V	2.60	0.394	1.00	0.204	1.643	0.310	0.275	0.148	0.086	0.126	0.148	0.0217	0.1063	0.235	0.064	0.0068
1	SCRM 661/4	2.56	0.30	0.84	0.068	2.96	.	.	(1)	.	.	.	.	.	.	.	.
1	SCRM 656/9	2.537	0.820	0.060	0.108	2.504	.	.	.	.	.	.	.	.	.	.	.
1	Y 2863-2	2.50	1.83	0.069	0.026	3.14	0.020	3.73	0.136	.	.	0.096	.	.	0.066	0.61	.
1	VS ChG 37	2.49	0.92	0.038	0.046	2.03	0.512	0.90	0.82	.	.	0.55	.	.	0.092	0.227	.
1	SCRM 673/1	2.455	0.123	0.317	0.0112	1.702	.	0.103	0.0423	0.0287	0.053	0.0092	.	0.0206	0.0718	0.052	.
1	CZ 20034 11b	2.44	0.382	0.271	0.140	3.67	0.130	0.082	1.178	0.067	0.005	1.144	.	0.074	0.041	0.182	.
1	VS ChG 47	2.43	0.949	0.099	0.083	2.73	0.0104	0.029	1.89	0.0056	0.0042	0.0019	.	0.093	0.041	0.129	.
1	VS ChG 38	2.43	0.302	0.386	0.084	2.30	1.20	0.162	1.98	.	.	0.046	.	.	0.105	0.119	.
1	CZ 02033 5b	2.42	0.812	0.033	0.073	1.32	0.031	0.188	0.061	0.062	.	0.089	.	.	0.007	0.005	.
1	VS ChL2/1	2.38	1.03	0.054	0.023	0.55	0.97	0.114	0.077	.	0.013	0.012	.	.	0.009	0.050	.
1	CZ 20034 11a	2.37	0.343	0.271	0.163	3.31	0.086	0.084	1.219	0.046	0.005	1.130	.	0.070	0.028	0.184	.
1	DSZU CH07	2.33	1.36	0.090	0.064	3.01	0.35	0.403	0.34	0.036	.	0.66	(0.08)	(0.07)	0.150	0.52	.
1	CZ 02033 5c	2.30	0.704	0.027	0.091	1.40	0.013	0.188	0.085	0.103	0.013	0.104	.	(0.002)	0.008	0.054	.
1	11X C4S	1.954	0.565	0.1014	0.096	2.98	0.095	3.21	1.382	0.006	0.0210	0.177	0.0233	0.0140	0.080	0.0165	0.0037
1	SCRM 675	1.92	1.81	0.045	0.072	1.29	0.012	0.210	0.080	0.007	0.023	0.034	.	0.0062	0.007	0.178	0.0006
1	SCRM 655/4	1.90	0.44	0.180	0.076	2.110	.	.	(1)	.	.	.	.	.	.	.	.
1	VS ChG 46	1.87	0.067	0.0106	0.108	3.24	0.0109	0.025	0.666	.	.	0.63	.	.	.	0.109	.
1	Y 2863-1	1.78	2.41	0.021	0.009	3.62	0.022	4.77	0.031	.	.	0.038	0.0052	.	0.068	1.13	.

| # | Number | C | Mn | P | S | Si | Cu | Ni | Cr | Al | Co | Mo | Nb | Sn | Ti | V | Zn |

Number	As	B	Bi	Ca*	Ce	Mg	N	Pb	Sb	Se	Te	W	Zr	Units
VS ChL4/1	.	.	.	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~38 mm
SRM C1291	.	.	.	.	.	.	.	.	.	.	.	.	.	32 mm Ø x 19 mm
VS ChG 6/9	(0.003)	.	.	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~40 mm
DSZU CH01	.	(0.03)	.	(10)	.	(0.0005)	.	.	.	.	.	(0.02)	.	~30 mm x ~35 mm
VS ChG 40	.	.	.	.	.	.	.	.	.	.	.	.	.	~34 mm Ø x ~37 mm
11X C8V	0.0812	0.0366	0.014	.	.	.	0.0065	0.0052	0.069	0.0210	0.0049	0.0258	0.0064	~40 mm Ø x ~15 mm
SCRM 661/4	.	.	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm
SCRM 656/9	.	.	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm
Y 2863-2	.	0.0025	.	.	.	.	.	.	.	.	.	.	.	30 mm Ø x 18-30 mm
VS ChG 37	.	.	.	.	.	.	.	.	.	.	.	.	.	~34 mm Ø x ~37 mm
SCRM 673/1	.	.	.	.	.	.	.	.	.	.	.	.	.	40 mm x 37 mm x 10 mm
CZ 20034 11b	0.005	0.0032	0.007	.	.	.	.	0.007	0.011	.	.	(0.005)	0.007	40 mm Ø x 18 mm
VS ChG 47	0.014	.	.	.	.	.	.	.	0.040	.	.	.	.	~35 mm Ø x ~17 mm
VS ChG 38	.	.	.	.	.	.	.	.	.	.	.	.	.	~34 mm Ø x ~37 mm
CZ 02033 5b	.	0.014	0.020	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 18 mm
VS ChL2/1	.	.	.	.	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~38 mm
CZ 20034 11a	0.005	0.0018	0.011	.	.	.	.	0.017	0.013	.	.	(0.005)	0.007	40 mm Ø x 18 mm
DSZU CH07	.	(0.13)	.	(10)	.	(0.01)	.	.	.	.	.	.	.	~35 mm x ~35 mm x ~19mm
CZ 02033 5c	.	0.0078	0.007	.	.	.	.	.	.	(0.002)	(0.010)	.	(0.009)	40 mm Ø x 18 mm
11X C4S	0.0235	0.0351	0.0070	.	.	.	0.0126	0.034	0.0055	0.009	.	0.099	.	~40 mm Ø x ~15 mm
SCRM 675	0.035	.	.	.	.	.	.	.	.	.	.	.	.	40 mm x 37 mm x 10 mm
SCRM 655/4	.	.	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm
VS ChG 46	.	.	.	.	.	.	.	.	0.140	.	.	.	.	~35 mm Ø x ~17 mm
Y 2863-1	.	0.0024	.	.	.	.	.	.	.	.	.	.	.	30 mm Ø x 18-30 mm

| Number | As | B | Bi | Ca* | Ce | Mg | N | Pb | Sb | Se | Te | W | Zr | Units |

ALLOYED CAST IRON, CHART 1 of 2

= Class, where 1 = CRM and 2 = RM

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Mo	Pb	Sn	Ti	V	Mg	N
2	DSZU CH021	3.93	3.66	0.064	0.009	0.52	0.369	5.86	9.07	0.168	4.42	.	.	0.093	0.61	.	.
1	VS ChG 41/1	3.88	1.23	0.037	0.090	1.77	0.56	5.84	8.7	.	0.50	.	.	0.21	0.25	.	.
2	BAS NCRM5	3.70	0.27	0.025	0.015	1.15	0.204	6.74	10.44	.	0.10	.	.	.	0.06	.	.
1	SRM C1292	3.47	0.55	0.049	0.016	0.59	0.36	5.04	11.4	.	0.25	.	.	.	0.041	.	.
2	BAS CRRM5/2	3.43	0.30	0.029	0.018	0.20	0.22	0.36	30.35	0.15	0.63	.	.	0.009	0.11	.	.
1	Y 451052-1	3.31	1.54	0.369	0.0047	0.098	0.449	2.57	1.17	.	1.47	.	.	.	0.952	.	.
1	**BS PM15**	3.54	0.416	0.0198	0.0127	0.912	0.142	0.203	5.33	0.0025	1.22	(0.00001)	0.0034	0.0029	14.79	(0.0002)	0.111
1	VS ChG 44/1	3.25	1.91	0.018	0.029	1.28	2.46	0.210	25.4	.	0.028	.	.	0.43	0.106	.	.
1	11X 15309T	3.18	1.53	0.034	0.021	1.22	0.056	0.152	24.9	0.097	0.066	.	0.0047	0.013	0.098	.	.
1	Y 451052-7	3.13	0.201	0.024	0.116	2.48	0.154	0.129	31.26	.	0.086	.	.	0.033	0.087	.	.
2	58A SC01141	3.08	0.62	0.045	0.036	0.56	0.77	1.21	15.32	.	2.70	.	.	0.020	0.28	.	.
1	SRM C1290	3.04	0.66	0.030	0.013	0.971	0.065	0.917	30.5	.	(0.041)	.	.	.	0.442	.	.
1	Y TSK205	3.03	0.16	0.041	0.088	1.65	0.35	0.37	30.35	.	0.22	.	.	.	0.077	.	0.108
1	Y 451054-2	3.00	1.42	0.133	0.016	0.56	0.324	1.43	7.23	.	2.48	.	.	0.015	0.88	.	.
1	NCS HS11788	2.97	1.62	0.191	0.010	3.29	0.51	17.77	2.56	(0.0023)	0.0013	.	0.0003	0.043	0.017	.	.
1	Y 451052-2	2.96	1.24	0.211	0.0077	0.491	1.57	1.99	9.75	.	2.17	.	.	0.300	0.669	.	.
2	BAS NIRM5/1	2.95	1.01	0.103	0.005	1.50	0.21	21.7	0.51	.	.	.	.	.	.	0.055	.
2	58A ZS01036	2.95	0.719	0.077	0.024	0.970	0.448	0.806	13.89	.	0.683	.	0.048	0.035	0.135	.	.
2	BAS NIRM2/2	2.94	2.01	0.096	0.007	1.43	5.93	13.69	1.48	.	.	.	.	.	.	0.044	.
2	BAS CRRM4/2	2.93	0.58	0.049	0.042	0.45	0.53	0.58	21.93	<0.005	1.15	.	.	0.008	0.11	.	.
2	11X 20003K	2.91	1.53	0.174	0.007	3.03	0.52	17.8	2.53	.	.	.	.	.	.	.	.
1	11X S/1 Cr3J	2.91	0.861	0.072	0.023	1.07	9.01	14.53	1.61	.	.	.	.	.	.	.	.
2	DSZU CH022	2.90	1.76	0.033	0.018	0.43	2.53	2.19	14.85	0.053	2.65	.	.	0.078	0.45	.	.
2	11X 20001J	2.90	0.58	0.005	0.143	1.01	0.01	21.4	1.50	.	.	.	.	.	.	.	.
1	11X 15294W	2.76	0.451	0.082	0.029	0.36	0.103	0.309	29.3	(0.147)	0.091	0.012	0.036	.	0.132	.	.
1	Y 451054-3	2.73	1.09	0.105	0.036	0.99	0.451	1.20	12.97	.	2.08	.	.	0.045	0.66	.	.
1	VS ChG 45	(2.7)	1.01	0.096	0.047	2.96	0.040	0.60	32.65	.	0.198	.	.	0.011	0.111	.	.
1	VS CgG 42/1	2.69	2.78	0.068	0.034	0.411	1.37	0.26	14.8	.	1.87	.	.	0.131	0.48	.	.
2	BAS NCRM4	2.66	0.40	0.203	0.012	2.13	0.68	5.34	7.94	.	0.57	.	.	.	0.11	.	.
1	NCS HS11787	2.65	1.08	0.067	0.037	2.07	0.306	19.84	1.98	(0.085)	0.0014	.	0.0054	0.022	0.0096	.	.
1	11X 15310B	2.63	0.97	0.070	0.029	0.99	2.37	4.59	20.7	0.018	0.92	.	.	0.034	0.096	.	.
1	11X 0331-2M	2.62	1.85	0.050	(0.09)	3.14	6.68	15.1	1.54	0.137	0.067	0.019	0.0271	0.198	0.051	.	.
1	11X 15295S	2.58	1.02	0.059	0.048	0.783	0.213	0.326	28.5	0.122	0.363	0.008	0.026	0.008	0.270	.	.
1	Y TSK201	2.56	1.07	0.253	0.023	0.66	1.53	2.44	10.14	.	2.56	.	.	.	0.42	.	0.029
2	BAS NIRM6/1	2.53	4.07	0.225	0.049	2.68	0.11	26.9	1.02	.	0.51	.	.	.	.	.	.
2	BAS NIRM3	2.51	0.51	0.208	0.096	2.21	1.00	17.8	2.43	.	.	.	.	.	.	.	.
1	VS ChG 45/1	1.96	0.59	0.021	0.0091	3.08	0.056	0.95	33.8	.	0.209	.	.	.	0.21	.	.
1	VS ChG 43/1	0.87	1.02	0.063	0.076	4.44	0.171	0.439	23.7	.	0.107	.	.	0.033	0.040	.	.

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Mo	Pb	Sn	Ti	V	Mg	N

Number	B	Ce	Co	Nb	W	Zr	Units	Other
DSZU CH021	.	.	.	.	.	.	35 mm x 35 mm x 16 mm	
VS CHG41/1	.	.	.	.	.	.	~37 mm Ø x ~22 mm	
BAS NCRM5	.	.	.	.	.	.	40 mm x 37 mm x 10 mm	
SRM C1292	.	.	.	.	.	.	32 mm Ø x 19 mm	
BAS CRRM5/2	.	.	.	.	.	.	48 mm x 42 mm x 12 mm	
Y 451052-1	0.177	.	.	0.018	0.015	.	30 mm Ø x 18-30 mm	
BS PM15	.	.	0.0330	0.014	0.109	(0.0005)	38 mm Ø x 19+ mm **17025**	Fe:[73.0] As:0.0040 N:0.111 O:0.0129
VS CHG44/1	.	.	.	.	.	.	~37 mm Ø x ~22 mm	
11X 15309T	.	.	0.76	0.056	0.022	.	~40 mm Ø x ~15 mm	
Y 451052-7	0.015	.	.	0.010	0.175	.	30 mm Ø x 18-30 mm	
58A SC01141	.	.	.	.	.	.	~35 mm Ø x ~30 mm	
SRM C1290	.	.	.	.	.	.	32 mm Ø x 19 mm	
Y TSK205	.	.	.	.	.	.	35 mm Ø x 18-30 mm	
Y 451054-2	.	.	.	.	.	.	30 mm Ø x 18-30 mm	
NCS HS11788	0.0008	.	(0.0063)	.	(0.0002)	.	31 mm Ø x 28 mm	As: 0.014
Y 451052-2	0.142	.	.	0.182	1.99	.	30 mm Ø x 18-30 mm	
BAS NIRM5/1	.	0.016	.	0.15	.	.	48 mm x 42 mm x 12 mm	
58A ZS01036	.	.	0.024	0.025	0.172	.	~32 mm Ø x ~30 mm	As: (0.003)
BAS NIRM2/2	.	0.018	.	.	.	.	48 mm x 42 mm x 12 mm	
BAS CRRM4/2	.	.	.	.	.	.	48 mm x 42 mm x 12 mm	
11X 20003K	.	.	.	.	.	.	40 mm Ø x 15 mm	
11X S/1 Cr3J	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
DSZU CH022	.	.	.	.	.	.	35 mm x 35 mm x 16 mm	
11X 20001J	.	.	.	.	.	.	40 mm Ø x 15 mm	
11X 15294W	.	.	0.128	.	0.265	.	~40 mm Ø x ~15 mm	
Y 451054-3	.	.	.	.	.	.	30 mm Ø x 18-30 mm	
VS ChG45	.	.	.	.	.	.	~36 mm x ~36 mm Ø x ~18 mm	last
VS CHG42/1	.	.	.	.	.	.	~37 mm Ø x ~22 mm	
BAS NCRM4	.	.	.	.	.	.	40 mm x 37 mm x 10 mm	
NCS HS11787	0.0007	.	(0.0054)	.	(0.0002)	.	31 mm Ø x 28 mm	As: 0.0075
11X 15310B	.	.	0.157	.	0.188	.	~40 mm Ø x ~15 mm	
11X 0331-2M	.	.	0.179	0.134	0.004	0.0022	~40 mm Ø x ~15 mm	
11X 15295S	.	.	1.55	0.091	0.202	(0.0012)	~40 mm Ø x ~15 mm	
Y TSK201	.	.	.	.	.	.	35 mm Ø x 18-30 mm	
BAS NIRM6/1	.	0.006	.	.	.	.	48 mm x 42 mm x 12 mm	
BAS NIRM3	.	0.007	.	0.09	.	.	40 mm x 37 mm x 10 mm	
VS CHG45/1	.	.	.	.	.	.	~37 mm Ø x ~22 mm	
VS CHG43/1	.	.	.	.	.	.	~37 mm Ø x ~22 mm	

Number	B	Ce	Co	Nb	W	Zr	Units	Other

ALLOYED CAST IRON, CHART 2 of 2

= Class, where 1 = CRM and 2 = RM

#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Mo	Pb	Sn	Ti	V	Mg	N
2	BAS CRRM3/2	2.37	0.92	0.073	0.087	1.21	1.09	1.35	18.78	0.102	1.58	.	.	0.015	0.042	.	.
2	DSZU CH023	2.33	0.43	0.023	0.073	0.98	0.054	0.715	23.45	0.255	1.46	.	.	0.38	0.288	.	.
1	Y 451054-4	2.31	0.725	0.071	0.046	1.40	0.739	0.914	17.60	.	1.44	.	.	0.084	0.46	.	.
1	Y TSK200	2.11	0.82	0.319	0.022	0.17	1.86	3.22	4.97	.	3.50	.	.	.	0.60	.	0.021
2	DSZU CH024	2.01	1.22	0.102	0.037	2.18	0.88	0.222	27.84	0.096	3.86	.	.	0.099	0.164	.	.
1	Y 451052-4	2.00	0.803	0.090	0.025	1.16	0.738	1.07	18.28	.	0.598	.	.	0.087	0.380	.	.
2	BAS NIRM4	1.97	2.37	0.051	0.008	3.03	0.52	20.2	3.56	.	.	.	.	.	.	0.014	.
1	NCS HS11789	1.97	1.08	0.048	0.076	2.58	6.39	17.80	2.51	0.061	0.062	0.015	0.014	0.011	0.0093	.	.
2	BAS CRRM2/1	1.92	1.11	0.097	0.079	1.18	1.59	1.61	14.13	0.054	2.44	.	.	0.070	0.063	.	.
2	BAS NIRM1/1	1.83	6.74	0.058	0.015	3.26	0.20	11.8	0.300	.	.	.	.	.	.	0.021	.
2	BAS CRRM1/1	1.83	1.45	0.132	0.099	1.53	2.01	2.03	11.18	0.117	3.05	.	.	0.096	0.040	.	.
1	Y 451054-5	1.83	0.466	0.043	0.091	1.80	0.904	0.517	23.40	.	0.739	.	.	0.068	0.26	.	.
1	Y TSK202	1.81	1.16	0.201	0.057	2.00	1.10	1.91	15.42	.	2.20	.	.	.	0.33	.	0.075
2	DSZU CH025	1.80	0.387	0.030	0.026	2.70	1.23	1.77	35.14	0.351	0.302	.	.	0.117	0.044	.	.
2	BAS CRRM1/2	1.70	1.43	0.16	0.099	1.84	1.97	2.03	11.28	0.140	3.06	.	.	0.054	0.063	.	.
2	DSZU CH026	1.62	0.305	0.050	0.032	1.14	0.288	3.63	35.87	0.059	0.96	.	.	0.013	0.067	.	.
1	Y 451052-5	1.48	0.579	0.041	0.058	1.37	0.583	0.708	22.55	.	0.359	.	.	0.056	0.314	.	.
2	BAS NIRM8/2	1.45	1.58	0.105	0.014	5.61	0.23	35.3	2.47	.	0.77	.	.	.	.	0.033	.
1	Y 451054-6	1.45	0.254	0.024	0.123	2.38	1.15	0.216	28.96	.	0.213	.	.	0.084	0.13	.	.
1	Y TSK203	1.23	0.68	0.117	0.044	0.46	0.75	1.55	19.93	.	1.58	.	.	.	0.22	.	0.094
1	Y 451052-6	1.16	0.302	0.033	0.086	1.44	0.845	0.289	25.76	.	0.150	.	.	0.019	0.146	.	.
1	Y TSK204	0.91	0.34	0.078	0.063	1.00	0.53	0.97	25.37	.	0.95	.	.	.	0.14	.	0.114

Number	B	Ce	Co	Nb	W	Units	Other
BAS CRRM3/2	.	.	.	.	.	40 mm x 37 mm x 10 mm	
DSZU CH023	.	.	.	.	.	35 mm x 35 mm x 16 mm	
Y 451054-4	.	.	.	.	.	30 mm Ø x 18-30 mm	
Y TSK200	.	.	.	.	.	35 mm Ø x 18-30 mm	
DSZU CH024	.	.	.	.	.	35 mm x 35 mm x 16 mm	
Y 451052-4	0.086	.	.	0.071	1.05	30 mm Ø x 18-30 mm	
BAS NIRM4	.	0.011	.	0.37	.	40 mm x 37 mm x 10 mm	
NCS HS11789	0.0008	.	(0.0075)	.	(0.0002)	31 mm Ø x 28 mm	As: 0.0076 Bi: 0.067
BAS CRRM2/1	.	.	.	.	.	40 mm x 37 mm x 10 mm	
BAS NIRM1/1	.	0.022	.	.	.	40 mm x 37 mm x 10 mm	
BAS CRRM1/1	.	.	.	.	.	40 mm x 37 mm x 10 mm	last
Y 451054-5	.	.	.	.	.	30 mm Ø x 18-30 mm	
Y TSK202	.	.	.	.	.	35 mm Ø x 18-30 mm	
DSZU CH025	.	.	.	.	.	35 mm x 35 mm x 16 mm	
BAS CRRM1/2	.	.	.	.	.	40 mm x 37 mm x 10 mm	
DSZU CH026	.	.	.	.	.	35 mm x 35 mm x 16 mm	
Y 451052-5	0.076	.	.	0.022	0.694	30 mm Ø x 18-30 mm	
BAS NIRM8/2	.	0.013	.	.	.	48 mm x 42 mm x 12 mm	
Y 451054-6	.	.	.	.	.	30 mm Ø x 18-30 mm	
Y TSK203	.	.	.	.	.	35 mm Ø x 18-30 mm	
Y 451052-6	0.055	.	.	0.014	0.370	30 mm Ø x 18-30 mm	
Y TSK204	.	.	.	.	.	35 mm Ø x 18-30 mm	

RM CAST IRON MUSHROOMS CONTINUED ON THE NEXT PAGE

typical analysis — each unit is one pair of 43 mm Ø x 5 mm mushroom discs

Number	C	Si	Mn	P	S	Cu	Ni	Cr	Al	Co	Mo	Sn	Ti	V	W
CTIF FO19	4.04	1.05	1.05	0.032	0.057	.	.	.	.	.	.	.	.	.	.
CTIF FO12	3.71	1.86	0.44	0.038	0.004	0.77	.	.	0.008	.	.	0.011	.	.	.
CTIF FO8	3.6	1.04	0.37	0.107	0.021	0.215	0.30	0.30	.	.	0.005	0.05	0.055	0.014	.
CTIF FCR7	3.59	1.07	0.365	0.099	0.0427	0.704	0.947	33.65	.	.	2.62	.	.	.	.
CTIF FO6	3.49	0.55	0.715	0.87	0.106	0.120	0.128	0.45	.	.	0.202	0.039	0.080	0.110	.
CTIF FO10	3.5	0.67	1.05	0.20	0.101	0.114	0.118	0.38	.	.	0.20	.	0.1	0.08	.
CTIF NH3	3.47	0.85	0.175	0.36	0.024	0.031	2.53	1.76	.	.	0.73	.	.	.	.
CTIF FO11	3.45	1.57	0.685	0.052	0.103	0.211	0.235	0.34	.	(0.013)	0.225	0.066	0.078	0.113	.
CTIF FO18-2	3.4	1.2	0.60	1.34	0.136	0.049	0.140	0.170	.	.	0.179	0.046	0.055	0.102	.
CTIF NH7-1	3.43	0.95	0.63	0.035	0.022	0.105	5.53	9.02	.	.	.	.	.	.	.
CTIF FCR5	3.43	0.35	0.62	0.052	0.0175	1.02	2.69	28.5	.	.	3.27	.	.	.	.
CTIF FT2-1	3.39	1.415	0.78	0.045	0.095	0.01	0.070	0.030	.	.	.	.	0.100	0.405	.
CTIF FO18-1	3.25	1.33	0.52	1.11	0.132	0.09	0.18	0.087	.	.	0.16	0.15	0.17	0.17	.
CTIF NiMo1	3.22	2.585	0.200	0.0590	(0.0030)	0.376	2.165	0.0353	.	0.0205	0.457	0.0020	0.0190	0.0169	.
CTIF FL7	3.22	2.550	0.100	1.34	0.048	0.351	0.232	0.043	.	.	0.335	0.0291	0.0525	0.0796	.
CTIF FT3	3.2	1.55	0.345	0.063	0.051	0.015	0.092	0.685	.	.	.	.	0.2	0.016	.
CTIF NH7-2	3.2	1.20	0.91	0.034	0.0120	0.108	5.53	8.87	.	.	.	.	.	.	.
CTIF FO5	3.2	0.7	0.2	1.30	0.027	0.12	0.172	0.3	.	.	0.41	0.109	0.04	0.14	.
CTIF NH9	3.13	1.24	0.65	0.087	0.029	0.203	4.11	11.70	.	.	0.059	.	.	.	.
CTIF NR Cu1	3.12	1.465	0.172	0.090	0.99	4.95	18.02	0.994	(0.095)	.	.	.	.	.	.
CTIF FL6	3.1	1.4	0.6	0.012	0.18	0.079	1.03	0.167	.	0.028	0.50	0.005	0.15	0.033	.
CTIF FL10	3.1	1.3	0.85	0.323	0.066	0.104	0.10	(0.07)	(0.03)	.	0.0335	0.028	0.045	0.048	(0.02)
CTIF FPA 1	3.090	0.0300	0.100	0.0022	0.0009	0.0622	0.0450	0.0710	.	0.0097	0.0109	.	0.0010	0.0010	.
CTIF NR 8S	3.05	1.41	4.39	0.124	.	0.071	14.20	0.191	.	.	.	.	.	.	.
CTIF FO17	3.01	2.48	0.475	0.470	0.168	(0.006)	0.021	(0.016)	.	0.032	.	0.024	0.032	0.018	.
CTIF FAL 1	3.0	1.0	0.2	0.04	<0.001	0.2	0.06	0.04	2.1	.	0.015	.	0.01	.	.
CTIF NR 3L	2.99	3.05	0.72	0.088	0.052	0.26	21.58	2.97	.	.	.	.	.	.	.
CTIF NH1	2.98	1.35	0.90	0.060	0.105	1.99	1.38	0.83	.	.	1.45	.	.	.	.
CTIF NH8	2.98	0.80	0.57	0.052	0.076	0.065	8.16	5.03	.	.	0.125	.	.	.	.
CTIF NR 3S	2.92	2.91	0.77	0.024	.	0.33	24.63	3.05	.	.	.	.	.	.	.

Number	C	Si	Mn	P	S	Cu	Ni	Cr	Al	Co	Mo	Sn	Ti	V	W
CTIF FT1	2.9	2.12	0.71	0.12	0.025	0.012	0.11	0.057	.	.	.	0.067	0.19	0.525	.
CTIF NR 8L	2.89	1.70	5.19	0.054	0.030	0.075	13.33	0.165	.	.	.	.	.	.	.
CTIF NH4	2.84	0.49	0.28	0.12	0.022	0.09	3.60	2.46	.	.	0.30	.	.	.	.
CTIF FO4	2.81	1.51	0.64	0.58	0.009	0.31	0.32	0.17	.	.	0.095	0.013	0.075	0.049	.
CTIF FCR2	2.86	1.07	0.740	0.137	0.055	0.135	1.87	11.8	.	.	3.88	.	.	.	.
CTIF FL5	2.8	2.3	0.4	0.02	(0.005)	0.5	0.05	0.35	.	0.010	0.01	0.07	0.01	0.01	.
CTIF FCR Ni3	2.74	0.69	0.47	0.036	0.011	.	11.05	31.65	.	.	.	.	.	.	.
CTIF NH6	2.70	2.28	0.355	0.066	0.036	0.115	7.06	6.60	.	.	0.11	.	.	.	.
CTIF FO9	2.7	1.5	0.7	0.02	0.015	0.31	0.355	0.18	.	.	0.13	0.144	0.017	0.022	.
CTIF FL4	2.6	2.91	0.5	0.288	0.137	0.0168	0.061	0.45	.	.	0.090	0.011	0.0296	0.116	.
CTIF NR 1S	2.58	3.02	1.54	0.19	0.0015	0.11	20.60	2.00	.	.	.	.	.	.	.
CTIF NR 1L	2.50	3.00	1.34	0.125	0.10	0.49	25.87	1.74	.	.	.	.	.	.	.
CTIF NH2	2.50	1.81	1.04	0.047	0.058	1.02	1.78	1.26	.	.	1.01	.	.	.	.
CTIF NR Cu2	2.48	2.07	1.078	0.113	0.049	6.50	15.85	2.05	.	.	.	.	.	.	.
CTIF NR 4S	2.47	4.87	1.71	0.145	.	0.63	18.30	1.50	.	.	.	.	.	.	.
CTIF FCR4	2.47	1.40	2.05	0.097	0.066	1.32	0.571	24.2	.	.	2.16	.	.	.	.
CTIF FCR1	2.46	0.48	0.63	0.019	0.007	0.031	1.30	18.71	.	.	1.41	.	.	.	.
CTIF FO7-2	2.45	0.675	0.70	0.84	0.085	0.125	0.15	0.455	.	.	0.26	.	0.065	0.13	.
CTIF NR 4L	2.41	5.89	1.495	0.155	0.010	0.758	15.90	1.403	.	.	.	.	.	.	.
CTIF FO7-3	2.40	0.65	0.74	0.82	0.097	0.075	0.125	0.52	.	.	0.26	0.0015	0.045	0.12	.
CTIF NR 2S	2.32	1.43	0.530	0.062	.	0.210	36.3	0.51	.	.	.	.	.	.	.
CTIF NH5	2.31	0.31	0.24	0.115	0.04	0.035	4.90	2.85	.	.	0.017	.	.	.	.
CTIF FL3	2.3	2.1	0.27	0.729	(0.013)	0.102	0.553	0.107	.	.	0.106	0.111	0.05	0.049	.
CTIF NR 4G	2.24	5.60	1.72	0.11	(0.002)	0.64	21.30	1.40	.	.	.	.	.	.	.
CTIF NR 2G	2.25	1.47	0.380	0.0476	(0.003)	0.232	36.34	0.395	.	.	.	.	.	.	.
CTIF FL2	2.18	3.61	0.0400	0.049	0.082	0.0497	0.0238	0.440	(0.006)	0.0263	(0.004)	0.140	0.0750	0.201	.
CTIF FL1	2.1	3.2	0.80	0.118	0.0765	0.0195	0.245	0.06	.	(0.022)	0.038	0.305	0.020	0.015	.
CTIF FCR Ni2	2.02	1.50	0.61	0.185	0.024	.	13.05	29.00	.	.	.	.	.	.	.
CTIF NR Cu3	1.94	3.12	0.60	0.046	0.016	8.05	13.3	3.50	.	.	.	.	.	.	.
CTIF NR 6S	1.82	2.44	0.99	0.019	.	0.03	30.75	1.06	.	.	.	.	.	.	.
CTIF NR 5L	1.77	2.99	1.207	0.037	0.083	0.48	33.89	0.27	.	.	.	.	.	.	.
CTIF NR 6L	1.76	2.07	0.70	0.031	0.063	0.020	30.37	3.49	.	.	.	.	.	.	.
CTIF NR 5S	1.67	1.97	1.23	0.035	.	0.50	27.05	0.24	.	.	.	.	.	.	.
CTIF FCR6	1.44	0.76	1.47	0.201	0.086	0.480	0.188	30.84	.	.	0.455	.	.	.	.
CTIF FCR Ni1	1.27	1.63	0.71	0.41	0.06	0.02	16.50	26.20	.	.	.	.	.	.	.

Number	C	Si	Mn	P	S	Cu	Ni	Cr	Al	Co	Mo	Sn	Ti	V	W

CAST IRON MUSHROOMS CONTINUED FROM THE PREVIOUS PAGE

Number	As	B	Bs	Bi	Ce	N	Nb	Pb	Sb	Te	Zn
CTIF FO19	.	.	.	.	.	.	.	.	.	0.0005	.
CTIF FO12	.	.	.	.	.	.	.	.	.	.	.
CTIF FO8	.	.	.	.	.	.	.	.	.	.	.
CTIF FCR7	.	.	.	.	.	.	.	.	.	.	.
CTIF FO6	.	.	.	.	.	.	.	.	.	.	.
CTIF FO10	.	.	.	.	.	.	.	.	.	.	.
CTIF NH3	.	.	.	.	.	.	.	.	.	.	.
CTIF FO11	.	.	.	.	.	.	.	.	.	.	.
CTIF FO18-2	.	.	.	.	.	0.004	.	.	.	.	.
CTIF NH7-1	.	.	.	.	.	.	.	.	.	.	.
CTIF FCR5	.	.	.	.	.	.	.	.	.	.	.
CTIF FT2-1	.	.	.	.	.	.	.	.	.	.	.
CTIF FO18-1	.	.	.	.	.	.	.	.	.	.	.
CTIF NiMo1	.	.	.	.	.	.	.	.	.	.	.
CTIF FL7	(0.0266)	(0.010)	.	(0.010)	.	0.0035	.	.	.	.	.
CTIF FT3	.	.	.	.	.	.	.	.	.	.	.
CTIF NH7-2	.	.	.	.	.	.	.	.	.	.	.
CTIF FO5	.	.	.	.	.	.	.	.	.	.	.
CTIF NH9	.	.	.	.	.	.	.	.	.	.	.
CTIF NR Cu1	.	.	.	.	.	.	.	.	.	.	.
CTIF FL6	.	0.008	.	.	.	.	.	.	.	.	.
CTIF FL10	(0.022)	.	(0.012)	(0.004)	.	.	(0.018)	(0.002)	(0.032)	(0.001)	(0.029)
CTIF FPA 1	0.0109	.	.	.	.	0.0125	.	.	.	.	.
CTIF NR 8S	.	.	.	.	.	.	.	.	.	.	.
CTIF FO17	.	.	.	.	.	.	.	.	.	.	.
CTIF FAL 1	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 3L	.	.	.	.	.	.	.	.	.	.	.
CTIF NH1	.	.	.	.	.	.	.	.	.	.	.
CTIF NH8	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 3S	.	.	.	.	.	.	.	.	.	.	.

Number	As	B	Bs	Bi	Ce	N	Nb	Pb	Sb	Te	Zn
CTIF FT1	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 8L	.	.	.	.	.	.	.	.	.	.	.
CTIF NH4	.	.	.	.	.	.	.	.	.	.	.
CTIF FO4	.	.	.	.	.	.	.	.	.	.	.
CTIF FCR2	.	.	.	.	.	.	.	.	.	.	.
CTIF FL5	.	(0.002)	.	(0.0005)	.	.	.	.	.	.	.
CTIF FCR Ni3	.	.	.	.	.	.	.	.	.	.	.
CTIF NH6	.	.	.	.	.	.	.	.	.	.	.
CTIF FO9	.	.	.	.	.	.	.	.	.	.	.
CTIF FL4	(0.05)	.	.	(0.003)	.	0.007	.	.	.	.	.
CTIF NR 1S	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 1L	.	.	.	.	.	.	.	.	.	.	.
CTIF NH2	.	.	.	.	.	.	.	.	.	.	.
CTIF NR Cu2	.	.	.	.	.	(0.0079)	.	.	.	.	.
CTIF NR 4S	.	.	.	.	.	.	.	.	.	.	.
CTIF FCR4	.	.	.	.	.	.	.	.	.	.	.
CTIF FCR1	.	.	.	.	.	.	.	.	.	.	.
CTIF FO7-2	.	.	.	.	.	0.0113	.	.	.	.	.
CTIF NR 4L	.	.	.	.	.	.	.	.	.	.	.
CTIF FO7-3	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 2S - producer low stock, only undersized pieces remaining											
CTIF NH5	.	.	.	.	.	.	.	.	.	.	.
CTIF FL3	.	.	.	.	.	0.008	.	.	.	.	.
CTIF NR 4G	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 2G	.	.	.	.	.	.	0.27	.	.	.	.
CTIF FL2	.	.	.	(0.0135)	.	.	.	.	.	.	.
CTIF FL1	.	.	.	.	.	.	.	.	.	.	.
CTIF FCR Ni2	.	.	.	.	.	.	.	.	.	.	.
CTIF NR Cu3	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 6S	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 5L	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 6L	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 5S	.	.	.	.	.	.	.	.	.	.	.
CTIF FCR6	.	.	.	.	.	.	.	.	.	.	.
CTIF FCR Ni1	.	.	.	.	.	.	.	.	.	.	.

Number	As	B	Bs	Bi	Ce	N	Nb	Pb	Sb	Te	Zn

ALLOY	ISO?	NUMBER
1.0812		ECRM 191-2D
1.2344		ECRM 271-1D
1.4410		ECRM 298-2D
1.4435, 1.4436		JK 27B
1.5415		HRT FE2012-N
1.6587		HRT FE2013-N
1.7149 20MnCrS5		ECRM 187-2D
1.7160		ECRM 194-1D
1.8550		ECRM 129-3D
1.8519		HRT FE2010-N
1005	17034	BS 1005
1005		DSZU C040a
1005		ECRM 064-2D
1005		SRM 1765
1005		SRM 1766
1005		SS 111/1
1006		IRSID 1670
1008	17034	BS XCAS
1008		ECRM 057-2D
1009	17034	BS 1009
1009 + Al	17034	BS XCCS-2
100C6		IRSID 1747
1010		IMZ 111
1011		IMZ 73
1012, 1013		IMZ 71A
1016	17034	BS 1016
1016		BS 1016A
1016		BS 1016B
1017		IMZ 112B
1017		IRSID 1664
1018		12X 10180C
1018		12X 10180D
1018	17034	BS 1018
1018	17034	BS 1018A
1018		ECRM 087-1D
1018		IARM 28K
1020	17025	BS 1020
1020		BS 1020A
1020		BS 1020B
1020		BS 57F
1020		IARM Fe1020-18
1023		IMZ 112A
1026	17034	BS 1026A
1026		IARM 359A
1030	17025	BS 1030
1030	17034	BS 1030A
1030		IARM 209D
1033		IRSID 1663
1035	17034	BS 1035
1035		IARM 360A
1039		IRSID 1637
1040	17034	BS 1040
1040		IARM 210D
1040		IRSID 1657
1042		IRSID 1656
1042		NM EN-8
1043		IRSID 1652
1045	17034	BS 1045
1045		BS 56E
1045		IARM 200D
1045		IPT 503
1050		IARM Fe1050-18
1060		IARM 373A
1069		ECRM 059-2D
1078		ECRM 056-2D
1078		SRM 1224
1080	17034	BS 54J
1090		SS 602/2
1095		BS 64C
1095		SRM 1227
1117	25(preceeded 17025)	BS 3993
1117		BS 65C
1117		IARM 29E
11L17	17025	BS 75F
11L17	17025	BS 75G
1118		IARM 307A
1118		IARM 307B
1141		BS 66B
1141		BS 1141
1141		IARM 348A
1144	17025	BS 1144A
1144		IARM 199C
1144		IARM Fe1144-22
1215		BS 66K
1215	17025	BS 66L
1215		IARM Fe1215-18
12L14		BS 74B
12L14	17025	BS 74C
12L14	17034	BS 74D
12Mn18Cr		BS 193
1345		BS XCCV
13-8PH		13X PH13800
13-8PH		BS 184A
13-8PH		IARM 21D
1429		ECRM 058-2D
1513		IMZ 76
1526 MOD		SRM 1269
1541		IARM 349A
1541		IPT 504
1541		IRSID 1648
1544		IRSID 1644
15-5PH		BS 185A
15-5PH		BS 9621
15-5PH		BS 9622
15-5PH		IARM Fe155PH-18
15-5PH		ECRM 273-1D
16MnCr5		PV 102/1
17-4PH		13X PH2
17-4PH		BS 17-4PHA
17-4PH	17034	BS 17-4PHC
17-4PH		IARM Fe174PH-18
17-4PH		SRM C2400
17-7PH		13X PH17700
17-7PH	25(preceeded 17025)	BS 192
17-7PH	25(preceeded 17025)	BS 192A
17-7PH		IARM Fe177PH-18
182FM		BS 150
18Cr2Ni12Mn		CT ISO035A
201		BS 191
201		SRM 1297
20Cb3		BS 187A
20Cb3		CT 20 Cb-3
20MoCr4		ECRM 197-1D
2101		IARM 292A
21Cr6Ni9Mn		CT ISO129A
2205		13x NSA9
2205	17034	BS 2205A
2205		IARM 212D
2205		HRT FE2000-H
2205		IARM Fe2205-18
2304		IARM 317A
2507	17034	BS 2507
2507		IARM 301B
2507		IARM Fe2507-21
253 MA	25(pre-17025)	BS 253
253 MA		IARM 316A
254 SMO	17034	BS 254
254 SMO		IARM Fe254SMO-21
254 SMO		NILAB 501HAD
255, Duplex		IARM 239B
255, Duplex		IARM 239C
300M	17034	BS 300A
300M		BS 300B
300M		IARM 340A
300M		IARM Fe300M-22
301		IARM 289A
301		IARM 289B
301		IRSID 1819
302		IARM 241D
302 HQ		IARM 234C
303		13X 30300
303	17025	BS 303
303		CT 303
303		CZ SP-1A
303		IARM Fe303-18
303 Se		IARM 253A
303 Se		IARM 253B
304 H		13X NSB1
304 H + Ca	17034	BS CA304-4
304 H		CT 304
304 H		IARM Fe304H-18
304 H		SS 468/1
304 L		13X 30403
304 L	17034	BS 304C
304 L		IARM 162D
304 L		IARM Fe304L-22
304 L		ECRM 287-1D
304 L		ECRM 292-1D
304 L		IARM 162D
304 L		PV 111/1
304 L		TL 2003D
304 L		SS 463/1
305		ECRM 297-1D
306		13X 30600A
308		DSZU C017
309		BS 82E
309	17034	BS 309
309		IARM Fe309-18
310		13X 31008
310		BS 83G
310	25(pre-17025)	BS 9841
310	25(pre-17025)	BS 9842
310		CZ SL-3A
310		IARM 4E
310		IARM 4F
310		IARM 4G
310		SS 464/1
3115		BS XCCT
314		IMZ 165
314		IMZ 166A
316 H		CT 316
316 H		IARM 339A
316 H		NILAB 500HAD
316 L	17034	BS 316G
316 L		CZ SL-2A
316 L		IARM 163E
316 L		IARM Fe316L-23
316 L		SRM 1155A
316 L		SS 466/2
316 MOD		TL 2002
316 Ti		IRSID 1821
316 Ti		PV 112/1
316 Ti		VS LG72
317 L	17034	BS 317L
317 L	25(pre-17025)	BS 9941
317 L	25(pre-17025)	BS 9942
317 L		IARM 153C
318	17034	BS 2205A
321		13X 32100
321	17034	BS 85D
321	17034	BS 321D
321		IARM 6i
321		IARM 6J
321		SRM 1171
321		SS 465/1
321 - Ti		IMZ 152
32750		13X NSA13
3310	17034	BS 3310
347		13X 34700
347		BS 347A
347		BS 347B
347	17034	BS 347C
347		IARM 8G
347		IARM 8H
347		IARM 8i
347 H		BS 87F
348		SRM 1172
355	17025	BS 355
355		IARM 335A
35MV7		IRSID 1750
405		SRM 1295
408		13X 40800A
409		13X 40900
409		13X 40930
409		IARM Fe409-20
409 + Cr		NCS HS20743
410		13X 41008
410	25(pre-17025)	BS 0021
410, F6NM	25(pre-17025)	BS 0022
410	17034	BS 410C
410		CT 410
410		IARM Fe410-18
410 + Mo		ECRM 296-1D
410 + Mo		IMZ 161
410 H		13X 41001
4130	17034	BS 4130A
4130		IARM 143F
4130		SRM 1225
4130 H		IPT 501
4140		12X 41400
4140	25(pre-17025)	BS 1962
4140	17034	BS 4140C
4140		IARM 30H
4140		IARM 30J
4140		IARM Fe4140-19
4140 Bi		BS 4140A
4140 Bi		BS 4140B
41L40MOD	17025	BS 70B
41L40MOD	17034	BS 70C
4150 Bi & S		BS 4150MOD
4150 S	17034	BS 4150MOD-A
4150 S	17034	BS 42
415		13X 41500A
415		IARM Fe415-21
416		BS 90F
416	17025	BS 416
416		CT 416
416		IARM Fe416-22
416		SRM 1223
416 H		13X 41600
416 Se		BS 151
418		IARM Fe418-18
41CAD7		IRSID 1749
41L40	17025	BS 70B
41L50	17025	BS 72B
42		CT ISO138A
42		CT ISO139A
42CrMo4		PV 101/1
420		BS 98
420	17034	BS 420
420		BS SS4951
420		BS SS4952
420		ECRM 272-1D
420		IARM 154C
420		SS 469
420 F		BS 152
420 F S		IARM 352A
422		13X 42200
422		BS 97
422	17025	BS 422
422	17034	BS 422A
422		IARM Fe422-22
430		BS 91E
430	17034	BS 430

Please use the Adobe Acrobat "search" function to find the complete chemistry of these samples listed within the catalog.

ALLOY	ISO?	NUMBER
430		IARM 11D
430		NCS HS20742
430 F		BS 153
430 F		BS 154
430 F S		IARM 355A
431	17025	BS 431
431	17034	BS 431A
4130	17025	BS 4130
4130	17034	BS 4130A
431		BS 92B
431		IARM 12C
431		HRT FE2010-H
431		SRM 1219
4320		BS 3961
4320	17034	BS 4320
4330 MOD	17034	BS 4330MOD
4330 MOD		IARM 330B
4340	17025	BS 4340
4340	17025	BS 4340A
4340	17034	BS 4340B
4340		IARM 31G
4340		IARM Fe4340-22
440 C		13X 44004
440 C		BS 93E
440 C	17025	BS 93F
440 C		IARM 13D
440 F		BS 155
440 F Se		BS 156
440 F Se		IARM 353A
446		BS 94C
450		BS 95A
450	17034	BS 450
450	25(pre-17025)	BS 9811
450	25(pre-17025)	BS 9812
450		IARM 15C
450		CT 450
455		13X 45500
455		BS 96A
455		BS SS1962
455		CT 455
455		IARM 16C
455		IARM Fe455-22
4615	17034	BS 3962
4620		BS 4620
4620	17034	BS 51F
4620		IARM 33D
465		13X 46500
465		IARM 354A
465		CT ISO123A
4820	17025	BS 4820A
4820	17034	BS 4820B
4820		IARM 155F
4820		IARM Fe4820-18
5140H		IARM Fe5140H-18
5160		IMZ 116
6150	17034	BS 43A
6150		BS 4941
6150		IARM 34C
6150		IARM Fe6150-22
630		CT 630
6418	17034	BS 6418
6418		BS 69B
6526		BS 9-4-30
709		CT X67975
8620		12X 86200-21
8620		BS 1931
8620 + Bi		BS 8620A
8620	17034	BS 8620G
8620		IARM Fe8620-18
8620		IPT 502
86L20	25(preceeded 17025)	BS 73B
86L20	17034	BS 73C
86L20	17034	BS 73D
8630	17034	BS 8630
8740		BS 67B
8740	17034	BS 8740
8740		IARM 252C
8740		IARM 252D
8740		IARM 252E
8740		IARM 252F
8822		BS 8822
8822	17034	BS 8822A
904L		13X NSA12
904L		ECRM 295-1D
904L		IARM Fe904L-22
9310		BS 58C
9310		BS 58D
9310		BS 58E
9310	17034	BS 9310
9310		IARM FeE9310-18
9325	17034	BS 9325A
9325	17034	BS 9325B
9-4-30		IARM 341A
A-10		BS A-10
A-11		BS 10V
A-11	17025	BS A-11
A-106 Gr B		SRM 1228
A-193 B16		BS 4942
A-193 B16	17025	BS 4942A
A-2		BS 36C
A-2		BS 36D
A-2		BS 36E
A-2		CT A2
A-2		IARM 39B
A-2		IARM 39C
A-242		IPT 500A
A-286	17025	BS 188B
A-286		IARM 26D
A-286		SRM 1230
A-36		BS 1016
A-36		BS 1016
A-36		BS 1018
A-36		BS 1020
A-36		BS LF2B
A-36		IARM 213C
A-36		IARM 213D
A-485-1		BS A485-1
A-6		BS 40B
A-6		IARM 40B
A-6		IARM 40C
A615-75		IARM 378A
A706-60		IARM 380A
A706-60		IARM 380B
A706-80		IARM 381A
Aermet 100		CT ISO045A
Aermet 100		IARM 242A
Aermet 100		IARM FeA100-18
AL6XN	17025	BS 189A
AL6XN		IARM 157D
C-.5Mo	17034	BS 3952
C-.5Mo		IARM 229B
C-250		IARM 308A
C-350		IARM 309A
CA6NM		HRT FE2009-H
CA6NM		IARM 327A
CD3MN		ECRM 298-2D
CD4MCU	17034	BS CD4MCU
CD4MCU	17034	BS CD4MCU-A
CD6MN		VS LG58
CF-3		IRSID 1820
CF3M		ECRM 284-3D
CLA6		IARM 169B
CLA7		IARM 170B
CLA11		IARM 180A
CLA5		IARM 168A
CLA9		IARM 172A
CPM15V	17025	BS PM15
CPM15V		IARM Fe15V-18
D-2		BS 37E
D-2		BS 37G
D-2		BS 37H
D-2		CT D2
D-2		IARM 41D
D-6	17025	BS D-6
D-6	17034	BS D-6A
D6-AC		IARM 299A
DP1080		IARM FeDP1080-18
Duplex		13X NSA9
Duplex	17034	BS 2205A
Duplex		IMZ 163A
Duplex		IMZ 164
Duplex		TL 2001
E52100	17034	BS E52100
E52100		IARM 49E
E52100 Bi		BS 53MOD
Elect./ Magnetic		SRM 1159
Electrolytic		SRM 1265a
ER321		13X 32180A
F-1		IARM FeF1-21
F-1		RM Fe 2
F-11		BS 45A
F-11	17034	BS 45B
F-11	17034	BS 45C
F-11		IARM 35L
F-11		IARM FeF11-21
F-2		CT X27081
F-22	17034	BS 46B
F-22 25(preceeded 17025)		BS 1982
F-22		IARM 36C
F-22		SRM 1270
F-22		SRM 1270A
F-22 + Cr		HRT FE2009-N
F-5		BS 47A
F-5		BS 47B
F-5		IARM 37C
F-51	17034	BS 2205A
F-9	17034	BS 48B
F-9		IARM FeF9-18
F-91		13X 90901
F-91	17025	BS 9905A
F-91		HRT FE2003-H
F-91		IARM Fe91-18
Ferralium 255		BS 179A
Ferallium 255	17025	BS 179B
Ferallium 255	17025	BS 179C
F6NM 25(preceded 17025)		BS 0022
Greek Ascoloy		BS 183A
Greek Ascoloy	17034	BS 183B
Greek Ascoloy	17034	BS 183C
Greek Ascoloy		IARM 20C
H-10		BS 49
H-11		BS TH11
H-11		ECRM 276-2D
H-11		IARM 255A
H-11		IARM 255B
H-11		IMZ 173
H-12		BS TH12
H-13		BS 34D
H-13	17034	BS H-13A
H-13		CT H13
H-13		IARM 42C
H-13		IMZ 174
H-19	17025	BS H-19
HC 250+V		SRM C1290
High Perm		CT ISO124A
High Perm		CT ISO136A
High Perm 49		CT ISO141A
HSLA 100		SRM 1271
HY 130		SRM 1226
HY 80		SRM 1286
Hy-Tuff		IARM 342A
Invar		14X 93603
Invar-36	17034	BS 186B
Invar-36 + Se		BS 186A
Invar-36 + Se		IARM 24B
Invar 36 + Se		IARM FeINVR36-22
Invar 42		14X 94100
ISO 898-1		SS 457/2
Kovar	17025	BS 160A
Kovar	17034	BS 160B
Kovar		IARM 98B
Kovar		IARM FeKovar-18
L-6	17025	BS 39B
L-6		IARM FeL6-18
LDX2101		13X 32101
LF-2		BS 2971
LF-2	17025	BS LF2C
LF-2		SS 601/2
LF-3		BS LF3
LF-3		BS LF3A
M-1		BS TM1
M-1		CT M1
M-1		IARM 304A
M-1		IARM FeM1-18
M-10		CT M10
M-10		IARM 324A
M-152		13X 64152
M-152		IARM 291A
M-2		BS 32D
M-2		CT M2
M-2		IARM 44C
M-2		IARM FeM2-18
M-2		SRM 1157
M-35		IARM 320A
M-4		IARM 251A
M-4		IARM FeM4-18
M-42		SS 487/1
M-47	17025	BS M-47
M-50	17025	BS M-50
M-50		IARM 306B
M-65		IARM FeM62-18
M-7		CT M7
Maraging 250	17034	BS M250
Maraging 250		CT 250
Maraging 250		ECRM 285-2
Maraging 250		IARM FeC250-21
Maraging 300	25(pre17025)	BS 161A
Maraging 300	17034	BS 161B
Maraging 300		CT 300
Maraging 300		IARM 99D
Mold Steel	17025	BS PP20
NIT 135M		IARM 305B
Nitriding 135G		BS 68B
Nitriding 135G	17025	BS 68E
Nitronic 40		13X NSC6
Nitronic 40		BS 190
Nitronic 40		IARM FeN40-18
Nitronic 50		BS 180A
Nitronic 50	17034	BS 180B
Nitronic 50		IARM 17D
Nitronic 50		IARM FeN50-18
Nitronic 60	17025	BS 181B
Nitronic 60		IARM 18D
NMS 100		IARM 214A
NMS 140		IARM 295A
O-1	17025	BS 35D
O-1		CT O1
O-2		CZ LA-4C
O-6	17025	BS 41
O-6 25(preceeded 17025)		BS 41A
O-6		IARM 45A
O-6		IARM 45B
P-20 MOD	17034	BS 55H
P-20 + Al		BS 68C
RA330		BS 86F
Railroad Steel	17034	BS 54H
Railroad Steel	17034	BS 54J
S-1		BS 33D
S-1		BS 33E
S-1		IARM 46B
S-1 MOD	17034	BS 33F
S-5		BS 38C
S-5		IARM 47B
S-7		BS TS7
S-7	17034	BS TS-7A
S-7		IARM 259A
S-7		IARM FeS7-18
S-7		SRM 1772
S42027		13X 42027A
SA213-T22		IMZ 159
SA213-T22		IMZ 160
SA213-T22		IMZ 169
SAE G2500		BS 20E
STA 361		IARM 268B
T-1	17025	BS 30D
T-1		IARM FeT1-18
T-4		IARM 281A
T-15	17034	BS TS15
T23		IARM FeT23-18
VM12		IMZ 196
W-5		14X 72305
Z30C13		IRSID 1825
Zeron 100, Duplex		13X NSA8
Zeron 100, Duplex		IARM FeZ100-18

CARBON STEEL SPECIFICATIONS

Number	C	Mn	P	S
1005	<0.06	<0.35	<0.03	<0.05
1006	<0.08	0.25-0.40	<0.03	<0.05
1008	<0.10	0.30-0.50	<0.03	<0.05
1009	<0.15	<0.60	<0.03	<0.05
1010	0.08-0.13	0.30-0.60	<0.03	<0.05
1011	0.09-0.14	0.60-0.90	<0.03	<0.05
1012	0.10-0.15	0.30-0.60	<0.03	<0.05
1013	0.11-0.16	0.50-0.80	<0.03	<0.05
1015	0.13-0.18	0.30-0.60	<0.03	<0.05
1016	0.13-0.18	0.60-0.90	<0.03	<0.05
1017	0.15-0.20	0.30-0.60	<0.03	<0.05
1018	0.15-0.20	0.60-0.90	<0.03	<0.05
1019	0.15-0.20	0.70-1.00	<0.03	<0.05
1020	0.18-0.23	0.30-0.60	<0.03	<0.05
1021	0.18-0.23	0.60-0.90	<0.03	<0.05
1022	0.18-0.23	0.70-1.00	<0.03	<0.05
1023	0.20-0.25	0.30-0.60	<0.03	<0.05
1025	0.22-0.28	0.30-0.60	<0.03	<0.05
1026	0.22-0.28	0.60-0.90	<0.03	<0.05
1029	0.25-0.31	0.60-0.90	<0.03	<0.05
1030	0.28-0.34	0.60-0.90	<0.03	<0.05
1033	0.29-0.36	0.70-1.00	<0.03	<0.05
1034	0.32-0.38	0.50-0.80	<0.03	<0.05
1035	0.32-0.38	0.60-0.90	<0.03	<0.05
1037	0.32-0.38	0.70-1.00	<0.03	<0.05
1038	0.35-0.42	0.60-0.90	<0.03	<0.05
1039	0.37-0.44	0.70-1.00	<0.03	<0.05
1040	0.37-0.44	0.60-0.90	<0.03	<0.05
1042	0.40-0.47	0.60-0.90	<0.03	<0.05
1043	0.40-0.47	0.70-1.00	<0.03	<0.05
1044	0.43-0.50	0.30-0.60	<0.03	<0.05
1045	0.43-0.50	0.60-0.90	<0.03	<0.05
1046	0.43-0.50	0.70-1.00	<0.03	<0.05
1049	0.46-0.53	0.60-0.90	<0.03	<0.05
1050	0.48-0.55	0.60-0.90	<0.03	<0.05
1053	0.48-0.55	0.70-1.00	<0.03	<0.05
1055	0.50-0.60	0.60-0.90	<0.03	<0.05
1059	0.55-0.65	0.50-0.80	<0.03	<0.05
1060	0.55-0.65	0.60-0.90	<0.03	<0.05
1064	0.60-0.70	0.50-0.80	<0.03	<0.05
1065	0.60-0.70	0.60-0.90	<0.03	<0.05
1069	0.65-0.75	0.40-0.70	<0.03	<0.05
1070	0.65-0.75	0.60-0.90	<0.03	<0.05
1074	0.70-0.80	0.50-0.80	<0.03	<0.05
1078	0.72-0.85	0.30-0.60	<0.03	<0.05
1080	0.75-0.88	0.60-0.90	<0.03	<0.05
1084	0.83-0.93	0.60-0.90	<0.03	<0.05
1085	0.80-0.94	0.70-1.00	<0.03	<0.05
1086	0.80-0.93	0.30-0.50	<0.03	<0.05
1090	0.85-0.98	0.60-0.90	<0.03	<0.05
1095	0.90-1.03	0.30-0.50	<0.03	<0.05

| Number | C | Mn | P | S |

CARBON STEEL SPECIFICATIONS

Number	C	Mn	P	S	Si
1513	0.10-0.16	1.10-1.40	<0.03	<0.05	.
1522	0.18-0.24	1.10-1.40	<0.04	<0.05	.
1524	0.19-0.25	1.35-1.65	<0.04	<0.05	.
1526	0.22-0.29	1.10-1.40	<0.04	<0.05	.
1527	0.22-0.29	1.20-1.50	<0.04	<0.05	.
1533	0.30-0.37	1.10-1.40	<0.04	<0.05	.
1534	0.30-0.37	1.20-1.50	<0.04	<0.05	.
1541	0.36-0.44	1.35-1.65	<0.04	<0.05	.
1544	0.40-0.47	0.80-1.10	<0.04	<0.05	.
1545	0.43-0.50	0.80-1.10	<0.04	<0.05	.
1546	0.44-0.52	1.00-1.30	<0.04	<0.05	.
1548	0.44-0.52	1.10-1.40	<0.04	<0.05	.
1552	0.47-0.55	1.20-1.50	<0.04	<0.05	.
1553	0.48-0.55	0.80-1.10	<0.04	<0.05	.
1566	0.60-0.70	0.85-1.15	<0.04	<0.05	.
1570	0.65-0.75	0.80-1.10	<0.04	<0.05	.
1580	0.75-0.88	0.80-1.10	<0.04	<0.05	.
1590	0.85-0.98	0.80-1.10	<0.04	<0.05	.
LF2	<0.30	0.60-1.35	<0.035	<0.04	0.15-0.30

| Number | C | Mn | P | S | Si |

RESULFURIZED STEEL SPECIFICATIONS

Number	C	Mn	P	S
1108	0.08-0.13	0.50-0.80	<0.04	0.08-0.13
1109	0.08-0.13	0.60-0.90	<0.04	0.08-0.13
1110	0.08-0.13	0.30-0.60	<0.04	0.08-0.13
1116	0.14-0.20	1.10-1.40	<0.04	0.16-0.23
1117	0.14-0.20	1.00-1.30	<0.04	0.08-0.13
1118	0.14-0.20	1.30-1.60	<0.04	0.08-0.13
1119	0.14-0.20	1.00-1.30	<0.04	0.24-0.33
1123	0.20-0.27	1.20-1.50	<0.04	0.06-0.09
1132	0.27-0.34	1.35-1.65	<0.04	0.09-0.13
1137	0.32-0.39	1.35-1.65	<0.03	0.08-0.13
1139	0.35-0.43	1.35-1.65	<0.04	0.13-0.20
1140	0.37-0.44	0.70-1.00	<0.03	0.08-0.13
1141	0.37-0.45	1.35-1.65	<0.03	0.08-0.13
1144	0.40-0.48	1.35-1.65	<0.03	0.24-0.33
1145	0.41-0.49	0.70-1.00	<0.04	0.08-0.13
1146	0.42-0.49	0.70-1.00	<0.04	0.08-0.13
1151	0.48-0.55	0.70-1.00	<0.04	0.08-0.13
1152	0.48-0.55	0.70-1.00	<0.04	0.06-0.09
1211	<0.13	0.60-0.90	0.07-0.12	0.10-0.15
1212	<0.13	0.70-1.00	0.07-0.12	0.16-0.23
1213	<0.13	0.70-1.00	0.07-0.12	0.24-0.33
1215	<0.09	0.75-1.05	0.04-0.09	0.26-0.35

| Number | C | Mn | P | S |

These are specifications, not samples for sale.

LOW ALLOY STEEL SPECIFICATIONS

Number	C	Mn	P	S	Si	Ni	Cr	Mo	Pb	Other
1330	0.28-0.33	1.60-1.90	<0.035	<0.04	0.15-0.35	.	.	.	.	
1335	0.33-0.38	1.60-1.90	<0.035	<0.04	0.15-0.35	.	.	.	.	
1340	0.38-0.43	1.60-1.90	<0.035	<0.04	0.15-0.35	.	.	.	.	
1345	0.43-0.48	1.60-1.90	<0.035	<0.04	0.15-0.35	.	.	.	.	
3140	0.38-0.43	0.70-0.90	<0.04	<0.04	0.15-0.35	1.10-1.40	0.55-0.75	.	.	
4023	0.20-0.25	0.70-0.90	<0.035	<0.04	0.15-0.35	.	.	0.20-0.30	.	
4027	0.25-0.30	0.70-0.90	<0.035	<0.04	0.15-0.35	.	.	0.20-0.30	.	
4028	0.25-0.30	0.70-0.90	<0.035	0.035-0.050	0.15-0.35	.	.	0.20-0.30	.	
4037	0.35-0.40	0.70-0.90	<0.035	<0.04	0.15-0.35	.	.	0.20-0.30	.	
4047	0.45-0.50	0.70-0.90	<0.035	<0.04	0.15-0.35	.	.	0.20-0.30	.	
4118	0.18-0.23	0.70-0.90	<0.035	<0.04	0.15-0.35	.	0.40-0.60	0.08-0.15	.	
4120	0.18-0.23	0.80-1.20	<0.035	<0.04	0.15-0.35	.	0.40-0.60	0.15-0.25	.	
4121	0.18-0.23	0.75-1.00	<0.035	<0.04	0.15-0.35	.	0.45-0.65	0.15-0.25	.	
4130	0.28-0.33	0.40-0.60	<0.035	<0.04	0.15-0.35	.	0.80-1.10	0.15-0.25	.	
4135	0.33-0.38	0.70-0.90	<0.035	<0.04	0.15-0.35	.	0.80-1.10	0.15-0.25	.	
4137	0.35-0.40	0.70-0.90	<0.035	<0.04	0.15-0.35	.	0.80-1.10	0.15-0.25	.	
4140	0.38-0.43	0.75-1.00	<0.035	<0.04	0.15-0.35	.	0.80-1.10	0.15-0.25	.	
41L40	0.38-0.43	0.75-1.00	<0.035	0.02-0.04	0.15-0.35	.	0.80-1.10	0.15-0.25	0.15-0.35	
4142	0.40-0.45	0.75-1.00	<0.035	<0.04	0.15-0.35	.	0.80-1.10	0.15-0.25	.	
4145	0.43-0.48	0.75-1.00	<0.035	<0.04	0.15-0.35	.	0.80-1.10	0.15-0.25	.	
4147	0.45-0.50	0.75-1.00	<0.035	<0.04	0.15-0.35	.	0.80-1.10	0.15-0.25	.	
4150	0.48-0.53	0.75-1.00	<0.035	<0.04	0.15-0.35	.	0.80-1.10	0.15-0.25	.	
41L50	0.48-0.53	0.75-1.00	<0.035	0.02-0.04	0.15-0.35	.	0.80-1.10	0.15-0.25	0.15-0.35	
4320	0.17-0.22	0.45-0.65	<0.035	<0.04	0.15-0.35	1.65-2.00	0.40-0.60	0.20-0.30	.	
4340	0.38-0.43	0.60-0.80	<0.035	<0.04	0.15-0.35	1.65-2.00	0.70-0.90	0.20-0.30	.	
4615	0.13-0.18	0.45-0.65	<0.035	<0.04	0.15-0.35	1.65-2.00	.	0.20-0.30	.	
4617	0.15-0.20	0.45-0.65	<0.035	<0.04	0.15-0.35	1.65-2.00	.	0.20-0.30	.	
4620	0.17-0.22	0.45-0.65	<0.035	<0.04	0.15-0.35	1.65-2.00	.	0.20-0.30	.	
4715	0.13-0.18	0.70-0.90	<0.035	<0.04	0.15-0.35	0.70-1.00	0.45-0.65	0.45-0.65	.	
4720	0.17-0.22	0.50-0.70	<0.035	<0.04	0.15-0.35	0.90-1.20	0.35-0.55	0.15-0.25	.	
4815	0.13-0.18	0.40-0.60	<0.035	<0.04	0.15-0.35	3.25-3.75	.	0.20-0.30	.	
4820	0.18-0.23	0.50-0.70	<0.035	<0.04	0.15-0.35	3.25-3.75	.	0.20-0.30	.	
50B46	0.44-0.49	0.75-1.00	<0.035	<0.04	0.15-0.35	.	0.20-0.35	.	.	B: 0.0005-0.003
5120	0.17-0.22	0.70-0.90	<0.035	<0.04	0.15-0.35	.	0.70-0.90	.	.	
51L20	0.17-0.22	0.70-0.90	<0.035	<0.04	0.15-0.35	.	0.70-0.90	.	0.15-0.35	
5130	0.28-0.33	0.70-0.90	<0.035	<0.04	0.15-0.35	.	0.80-1.10	.	.	
5132	0.30-0.35	0.60-0.80	<0.035	<0.04	0.15-0.35	.	0.75-1.00	.	.	
5140	0.38-0.43	0.70-0.90	<0.035	<0.04	0.15-0.35	.	0.70-0.90	.	.	
5150	0.48-0.53	0.70-0.90	<0.035	<0.04	0.15-0.35	.	0.70-0.90	.	.	
5160	0.56-0.64	0.75-1.00	<0.035	<0.04	0.15-0.35	.	0.70-0.90	.	.	
51B60	0.56-0.64	0.75-1.00	<0.035	<0.04	0.15-0.35	.	0.70-0.90	.	.	B: >0.0005
6150	0.48-0.53	0.70-0.90	<0.035	<0.04	0.15-0.35	.	0.80-1.10	.	.	V: >0.15
8615	0.13-0.18	0.70-0.90	<0.035	<0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.15-0.25	.	
8617	0.15-0.20	0.70-0.90	<0.035	<0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.15-0.25	.	
8620	0.18-0.23	0.70-0.90	<0.035	<0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.15-0.25	.	
86L20	0.18-0.21	0.70-0.90	<0.035	0.02-0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.15-0.25	0.15-0.35	
8622	0.20-0.25	0.70-0.90	<0.035	<0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.15-0.25	.	
8630	0.28-0.33	0.70-0.90	<0.035	<0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.15-0.25	.	
8637	0.35-0.40	0.75-1.00	<0.035	<0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.15-0.25	.	
8640	0.38-0.43	0.75-1.00	<0.035	<0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.15-0.25	.	
8645	0.43-0.48	0.75-1.00	<0.035	<0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.15-0.25	.	
8720	0.18-0.23	0.70-0.90	<0.035	<0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.20-0.30	.	
8740	0.38-0.43	0.75-1.00	<0.035	<0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.20-0.30	.	
8822	0.20-0.25	0.75-1.00	<0.035	<0.04	0.15-0.35	0.40-0.70	0.40-0.60	0.30-0.40	.	
9259	0.56-0.64	0.75-1.00	<0.035	<0.04	0.70-1.10	.	0.45-0.65	.	.	
9260	0.56-0.64	0.75-1.00	<0.035	<0.04	1.80-2.20	.	.	.	.	
E4340	0.38-0.43	0.65-0.85	<0.025	<0.025	0.15-0.35	1.65-2.00	0.70-0.90	0.20-0.30	.	
E51100	0.98-1.10	0.25-0.45	<0.025	<0.025	0.15-0.35	.	0.90-1.15	.	.	
E52100	0.98-1.10	0.25-0.45	<0.025	<0.025	0.15-0.35	.	1.30-1.60	.	.	
E9310	0.08-0.13	0.45-0.65	<0.025	<0.025	0.15-0.35	3.00-3.50	1.00-1.40	0.08-0.15	.	
F-11	0.10-0.20	0.30-0.80	<0.04	<0.04	0.50-1.00	.	1.00-1.50	0.44-0.65	.	
F-22	<0.15	0.30-0.60	<0.03	<0.03	<0.50	.	2.00-2.50	0.90-1.10	.	
F-5	<0.15	0.30-0.60	<0.03	<0.03	<0.50	.	4.00-6.00	0.45-0.65	.	
F-9	<0.15	0.30-0.60	<0.03	<0.03	0.50-1.0	.	8.00-10.00	0.90-1.10	.	
F-91	0.08-0.12	0.30-0.60	<0.02	<0.01	0.20-0.50	<0.40	8.00-9.50	0.85-1.05	.	Al: <0.04 N: 0.03-0.07
F-91	continued									Nb: 0.06-0.10 V: 0.18-0.25
LF2	<0.30	0.60-1.35	<0.035	<0.04	0.15-0.30	.	.	.	.	
LF3	<0.20	<0.90	<0.035	<0.04	0.20-0.35	3.25-3.75	.	.	.	

Number C Mn P S Si Ni Cr Mo Pb Other

These are specifications, not samples for sale.

TOOL STEEL SPECIFICATIONS

* notes optional chemistry

Number	C	Mn	P	S	Si	Ni	Cr	Co	Mo	V	W	Other
A-2	0.95-1.05	<1.00	<0.03	<0.03	<0.50	.	4.75-5.50	.	0.90-1.40	0.15-0.50	.	
A-4	0.95-1.05	1.80-2.20	<0.03	<0.03	<0.50	.	0.90-2.20	.	0.90-1.40	.	.	
A-6	0.65-0.75	1.80-2.50	<0.03	<0.03	<0.50	.	0.90-1.20	.	0.90-1.40	.	.	
A-7	2.00-2.85	<0.80	<0.03	<0.03	<0.50	.	5.00-5.75	.	0.90-1.40	3.90-5.15	0.50-1.50	
A-8	0.50-0.60	<0.50	<0.03	<0.03	0.75-1.10	.	4.75-5.50	.	1.15-1.65	.	1.00-1.50	
A-9	0.45-0.55	<0.50	<0.03	<0.03	0.95-1.15	1.25-1.75	4.75-5.50	.	1.30-1.80	0.80-1.40	.	
A-10	1.25-1.50	1.60-2.10	<0.03	<0.03	1.00-1.50	1.55-2.05	.	.	1.25-1.75	.	.	
A-11	2.45	0.50	.	.	0.90	.	5.25	.	1.30	9.75	.	
D-2	1.40-1.60	<0.60	<0.03	<0.03	<0.60	.	11.00-13.00	<1.00	0.70-1.20	<1.10	.	
D-3	2.00-2.35	<0.60	<0.03	<0.03	<0.60	.	11.00-13.50	.	.	<1.00	<1.00	
D-4	2.05-2.40	<0.60	<0.03	<0.03	<0.60	.	11.00-13.00	.	0.70-1.20	<1.00	.	
D-5	1.40-1.60	<0.60	<0.03	<0.03	<0.60	.	11.00-13.00	2.50-3.50	0.70-1.20	<1.00	.	
D-7	2.15-2.50	<0.60	<0.03	<0.03	<0.60	.	11.50-13.50	.	0.70-1.20	3.80-4.40	.	
H-10	0.35-0.45	0.25-0.70	<0.03	<0.03	0.80-1.20	.	3.00-3.75	.	2.00-3.00	0.25-0.75	.	
H-11	0.33-0.43	0.20-0.50	<0.03	<0.03	0.80-1.20	.	4.75-5.50	.	1.10-1.60	0.30-0.60	.	
H-12	0.30-0.40	0.20-0.50	<0.03	<0.03	0.80-1.20	.	4.75-5.50	.	1.25-1.75	<0.50	1.00-1.70	
H-13	0.32-0.45	0.20-0.50	<0.03	<0.03	0.80-1.20	.	4.75-5.50	.	1.10-1.75	0.80-1.20	.	
H-14	0.35-0.45	0.20-0.50	<0.03	<0.03	0.80-1.20	.	4.75-5.50	.	.	.	4.00-5.25	
H-19	0.32-0.45	0.20-0.50	<0.03	<0.03	0.20-0.50	.	4.00-4.75	4.00-4.50	0.30-0.55	1.75-2.20	3.75-4.50	
H-21	0.26-0.36	0.15-0.40	<0.03	<0.03	0.15-0.50	.	3.00-3.75	.	.	0.30-0.60	8.50-10.00	
H-22	0.30-0.40	0.15-0.40	<0.03	<0.03	0.15-0.40	.	1.75-3.75	.	.	0.25-0.50	10.00-11.75	
H-23	0.25-0.35	0.15-0.40	<0.03	<0.03	0.15-0.60	.	11.00-12.75	.	.	0.75-1.25	11.00-12.75	
H-24	0.42-0.53	0.15-0.40	<0.03	<0.03	0.15-0.40	.	2.50-3.50	.	.	0.40-0.60	14.00-16.00	
H-26	0.45-0.55	0.15-0.40	<0.03	<0.03	0.15-0.40	.	3.75-4.50	.	.	0.75-1.25	17.25-19.00	
H-42	0.55-0.70	0.15-0.40	<0.03	<0.03	0.20-0.45	.	3.75-4.50	.	4.50-5.50	1.75-2.20	5.50-6.75	
L-2	0.45-1.00	0.10-0.90	<0.03	<0.03	<0.50	.	0.70-1.20	.	<0.25	0.10-0.30	.	
L-6	0.65-0.75	0.25-0.80	<0.03	<0.03	<0.50	1.25-2.00	0.60-1.20	.	<0.50	.	.	
M-1	0.78-0.88	0.15-0.40	<0.03	<0.03	0.20-0.50	.	3.50-4.00	.	8.20-9.20	1.00-1.35	1.40-2.10	
M-2	0.78-1.05	0.15-0.40	<0.03	<0.03	0.20-0.45	.	3.75-4.50	.	4.50-5.50	1.75-2.20	5.50-6.75	
M-3.1	1.00-1.10	0.15-0.40	<0.03	<0.03	0.20-0.45	.	3.75-4.50	.	4.75-6.50	2.25-2.75	5.00-6.75	
M-3.2	1.15-1.25	0.15-0.40	<0.03	<0.03	0.20-0.45	.	3.75-4.50	.	4.75-6.50	2.75-3.25	5.00-6.75	
M-4	1.25-1.40	0.15-0.40	<0.03	<0.03	0.20-0.45	.	3.75-4.75	.	4.25-5.50	3.75-4.50	5.25-6.50	
M-6	0.75-0.85	0.15-0.40	<0.03	<0.03	0.20-0.45	.	3.75-4.50	11.00-13.00	4.50-5.50	1.30-1.70	3.75-4.75	
M-7	0.97-1.05	0.15-0.40	<0.03	<0.03	0.20-0.55	.	3.50-4.00	.	8.20-9.20	1.75-2.25	1.40-2.10	
M-10	0.84-1.05	0.10-0.40	<0.03	<0.03	0.20-0.45	.	3.75-4.50	.	7.75-8.50	1.80-2.20	.	
M-30	0.75-0.85	0.15-0.40	<0.03	<0.03	0.20-0.45	.	3.50-4.25	4.50-5.50	7.75-9.00	1.00-1.40	1.30-2.30	
M-33	0.85-0.92	0.15-0.40	<0.03	<0.03	0.25-0.55	.	3.50-4.00	7.75-8.75	9.00-10.00	1.00-1.35	1.30-2.10	
M-34	0.85-0.92	0.15-0.40	<0.03	<0.03	0.20-0.45	.	3.50-4.00	7.75-8.75	7.75-9.20	1.90-2.30	1.40-2.10	
M-36	0.80-0.90	0.15-0.40	<0.03	<0.03	0.20-0.45	.	3.75-4.50	7.75-8.75	4.50-5.50	1.75-2.25	5.50-6.50	
M-41	1.05-1.15	0.20-0.60	<0.03	<0.03	0.15-0.50	.	3.75-4.50	4.75-5.75	3.25-4.25	1.75-2.25	6.25-7.00	
M-42	1.05-1.15	0.15-0.40	<0.03	<0.03	0.15-0.65	.	3.50-4.25	7.75-8.75	9.00-10.00	0.95-1.35	1.15-1.85	
M-46	1.22-1.30	0.20-0.40	<0.03	<0.03	0.40-0.65	.	3.70-4.20	7.80-8.80	8.00-8.50	3.00-3.30	1.90-2.20	
M-48	1.50	.	.	.	.	.	3.75	9.00	5.25	3.10	10.0	
M-52	0.90	.	.	.	.	.	4.00	.	4.00	2.00	1.25	
M-61	1.60	.	.	.	.	.	4.00	.	6.50	5.00	12.0	
M-62	1.30	.	.	.	.	.	3.75	.	10.5	2.00	6.25	
O-1	0.85-1.00	1.00-1.40	<0.03	<0.03	<0.50	.	0.40-0.60	.	.	<0.30	0.40-0.60	
O-2	0.85-0.95	1.40-1.80	<0.03	<0.03	<0.50	.	<0.35	.	<0.30	<0.30	.	
O-6	1.25-1.55	0.30-1.10	<0.03	<0.03	0.55-1.50	.	<0.30	.	0.20-0.30	.	.	
O-7	1.10-1.30	<1.00	<0.03	<0.03	<0.60	.	0.35-0.85	.	<0.30	<0.40	1.00-2.00	
P-20	0.28-0.40	0.60-1.00	<0.03	<0.03	0.20-0.80	.	1.40-2.00	.	0.30-0.55	.	.	
P-21	0.18-0.22	0.20-0.40	<0.03	<0.03	0.20-0.40	4.00-4.25	0.20-0.30	.	.	0.15-0.25	.	Al: 1.05-1.25
P-6	0.05-0.15	0.35-0.70	<0.03	<0.03	0.10-0.40	3.25-3.75	1.25-1.75	.	.	.	.	
S-1	0.40-0.55	0.10-0.40	<0.03	<0.03	0.15-1.20	.	1.00-1.80	.	<0.50	0.15-0.30	1.50-3.00	
S-2	0.40-0.55	0.30-0.50	<0.03	<0.03	0.90-1.20	.	.	.	0.30-0.60	<0.50	.	
S-4	0.50-0.65	0.60-0.95	<0.03	<0.03	1.75-2.25	.	<0.35	.	.	<0.35	.	
S-5	0.50-0.65	0.60-1.00	<0.03	<0.03	1.75-2.25	.	<0.35	.	0.20-1.35	<0.35	.	
S-6	0.40-0.50	1.20-1.50	<0.03	<0.03	2.00-2.50	.	1.20-1.50	.	0.30-0.50	0.20-0.40	.	
S-7	0.45-0.55	0.20-0.80	<0.03	<0.03	0.20-1.00	.	3.00-3.50	.	1.30-1.80	0.20-0.30*	.	
T-1	0.65-0.80	0.10-0.40	<0.03	<0.03	0.20-0.40	.	3.75-4.50	.	.	0.90-1.30	17.25-18.25	
T-15	1.50-1.60	0.15-0.40	<0.03	<0.03	0.15-0.40	.	3.75-5.00	4.75-5.25	<1.00	4.50-5.25	11.75-13.00	
T-4	0.70-0.80	0.10-0.40	<0.03	<0.03	0.20-0.40	.	3.75-4.50	4.25-5.75	0.40-1.00	0.80-1.20	17.50-19.00	
T-5	0.75-0.85	0.20-0.40	<0.03	<0.03	0.20-0.40	.	3.75-5.00	7.00-9.50	0.50-1.25	1.80-2.40	17.50-19.00	
T-6	0.75-0.85	0.20-0.40	<0.03	<0.03	0.20-0.40	.	4.00-4.75	11.00-13.00	0.40-1.00	1.50-2.10	18.50-21.00	
T-8	0.75-0.85	0.20-0.40	<0.03	<0.03	0.20-0.40	.	3.75-4.50	4.25-5.75	0.40-1.00	1.80-2.40	13.25-14.75	
W-1	0.70-1.50	0.10-0.40	<0.025	<0.025	0.10-0.40	<0.20	<0.15	.	<0.10	<0.10	<0.15	Cu: <0.20
W-2	0.85-1.50	0.10-0.40	<0.03	<0.03	0.10-0.40	<0.20	<0.15	.	<0.10	0.15-0.35	<0.15	Cu: <0.20
W-5	1.05-1.15	0.10-0.40	<0.03	<0.03	0.10-0.40	<0.20	0.40-0.60	.	<0.10	<0.10	<0.15	Cu: <0.20

| Number | C | Mn | P | S | Si | Ni | Cr | Co | Mo | V | W | Other |

These are specifications, not samples for sale.

STAINLESS AND HIGH ALLOY STEEL SPECIFICATIONS

* notes optional chemistry

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	N	Nb	Other
13-8PH	<0.05	<0.20	<0.01	<0.008	<0.10	.	7.50-8.50	12.25-13.25	2.00-2.50	<0.01	.	Al: 0.90-1.35
15-5PH	<0.07	<1.00	<0.04	<0.03	<1.00	2.50-4.50	3.50-5.50	14.00-15.50	.	.	0.15-0.45	
17-4PH	<0.07	<1.00	<0.04	<0.03	<1.00	3.00-5.00	3.00-5.00	15.00-17.50	.	.	0.15-0.45	
201	<0.15	5.5-7.5	<0.060	<0.03	<1.00	.	3.50-5.50	16.00-18.00	.	<0.25	.	
202	<0.15	7.5-10.0	<0.060	<0.03	<1.00	.	4.00-6.00	17.00-19.00	.	<0.25	.	
301	<0.15	<2.00	<0.045	<0.03	<1.00	.	6.00-8.00	16.00-18.00	.	.	.	
302	<0.15	<2.00	<0.045	<0.03	<1.00	.	8.00-10.00	17.00-19.00	.	.	.	
302B	<0.15	<2.00	<0.045	<0.03	2.00-3.00	.	8.00-10.00	17.00-19.00	.	.	.	
303	<0.15	<2.00	<0.20	>0.15	<1.00	.	8.00-10.00	17.00-19.00	<0.60*	.	.	Zr: <0.60*
304	<0.08	<2.00	<0.045	<0.03	<1.00	.	8.00-10.50	18.00-20.00	.	.	.	
304L	<0.03	<2.00	<0.045	<0.03	<1.00	.	8.00-12.00	18.00-20.00	.	.	.	
305	<0.12	<2.00	<0.045	<0.03	<1.00	.	10.00-13.00	17.00-19.00	.	.	.	
308	<0.08	<2.00	<0.045	<0.03	<1.00	.	10.00-12.00	19.00-21.00	.	.	.	
309	<0.20	<2.00	<0.045	<0.03	<1.00	.	12.00-15.00	22.00-24.00	.	.	.	
310	<0.25	<2.00	<0.045	<0.03	<1.50	.	19.00-22.00	24.00-26.00	.	.	.	
314	<0.25	<2.00	<0.045	<0.03	1.50-3.00	.	19.00-22.00	23.00-26.00	.	.	.	
316	<0.08	<2.00	<0.045	<0.03	<1.00	.	10.00-14.00	16.00-18.00	2.00-3.00	.	.	
316	<0.08	<2.00	<0.045	<0.03	<1.00	.	10.00-14.00	16.00-18.00	2.00-3.00	.	.	
316L	<0.03	<2.00	<0.045	<0.03	<1.00	.	10.00-14.00	16.00-18.00	2.00-3.00	.	.	
321	<0.08	<2.00	<0.045	<0.03	<1.00	.	9.00-12.00	17.00-19.00	.	.	.	Ti: >5xC
347	<0.08	<2.00	<0.045	<0.03	<1.00	.	9.00-13.00	17.00-19.00	.	.	>10xC	
348	<0.08	<2.00	<0.045	<0.03	<1.00	.	9.00-13.00	17.00-19.00	.	.	>10xC	Ta: <0.10
384	<0.08	<2.00	<0.045	<0.03	<1.00	.	17.00-19.00	15.00-17.00	.	.	.	
385	<0.08	<2.00	<0.045	<0.03	<1.00	.	14.00-16.00	11.50-13.50	.	.	.	
403	<0.15	<1.00	<0.04	<0.03	<0.50	.	.	11.50-13.00	.	.	.	
405	<0.08	<1.00	<0.04	<0.03	<1.00	.	.	11.50-14.50	.	.	.	Al: 0.10-0.30
409	<0.08	<1.00	<0.04	<0.01	<1.00	.	<0.50	10.50-11.75	.	.	.	Ti: 6\mtC-0.75
410	<0.15	<1.00	<0.04	<0.03	<1.00	.	.	11.50-13.50	.	.	.	
414	<0.15	<1.00	<0.04	<0.03	<1.00	.	1.25-2.50	11.50-13.50	.	.	.	
416	<0.15	<1.25	<0.06	>0.15	<1.00	.	.	12.00-14.00	<0.60*	.	.	Zr: <0.60*
420	>0.15	<1.00	<0.04	<0.03	<1.00	.	.	12.00-14.00	.	.	.	
422	0.20-0.25	<1.00	<0.04	<0.03	<0.75	<0.50	0.50-1.00	11.00-12.50	0.75-1.25	.	.	V: 0.15-0.30
422	continued											W: 0.75-1.25
430	<0.12	<1.00	<0.04	<0.03	<1.00	.	.	16.00-18.00	.	.	.	
430F	<0.12	<1.25	<0.06	>0.15	<1.00	.	.	16.00-18.00	<0.60*	.	.	Zr: <0.60*
431	<0.20	<1.00	<0.04	<0.03	<1.00	.	1.25-2.50	15.00-17.00	.	.	.	
440A	0.60-0.75	<1.00	<0.04	<0.03	<1.00	.	.	16.00-18.00	<0.75	.	.	
440B	0.75-0.95	<1.00	<0.04	<0.03	<1.00	.	.	16.00-18.00	<0.75	.	.	
440C	0.95-1.20	<1.00	<0.04	<0.03	<1.00	.	.	16.00-18.00	<0.75	.	.	
450	<0.05	<1.00	<0.03	<0.03	<1.00	1.25-1.75	5.00-7.00	14.00-16.00	0.50-1.00	.	8\mtC	
455	<0.05	<0.50	<0.04	<0.03	<0.50	1.50-2.50	7.50-9.50	11.00-12.50	<0.50	.	0.10-0.50	Ti: 0.80-1.40
501	>0.10	<1.00	<0.04	<0.03	<1.00	.	.	4.00-6.00	0.40-0.65	.	.	
502	<0.10	<1.00	<0.04	<0.03	<1.00	.	.	4.00-6.00	0.40-0.65	.	.	
Duplex	<0.05	<3.00	<0.035	<0.03	<1.50	<2.50*	4.00-7.00	18.00-25.00	0.20-5.50	<0.40	.	

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	N	Nb	Other