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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	.	0.0015	.
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 XCAS-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
1035		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
1035		1	12X 10180C	0.171	0.803	0.0150	0.0200	0.147	0.0500	0.0284	0.0793	.	0.0047	0.0052	.	.	.
1035		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	.	.	.
1035		1	ECRM 087-1D	0.174	0.671	0.010	0.046	0.263	0.171	0.118	0.078	0.015	0.021	.	.	.	.
1035		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)	.
1035	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
1035	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)
1035		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	.
1035	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)
1035	* 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
1035	* 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
1035		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	.
1035		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
1035	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
1035		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)
1035	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)
1035		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)
1035	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
1035		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
1035		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
1035		1	12X 10180C	0.171	0.803	0.0150	0.0200	0.147	0.0500	0.0284	0.0793	.	0.0047	0.0052	.	.	.
1035		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	.	.	.
1035		1	ECRM 087-1D	0.174	0.671	0.010	0.046	0.263	0.171	0.118	0.078	0.015	0.021	.	.	.	.
1035		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)	.
1035	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
1035	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			

## 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 XCAS-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
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	<0.003	<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
12X 10180C	0.0198	0.0029	.	.	.	.	.	.	.	.	0.0024	.	Disc ~40 mm Ø x ~15 mm
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
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
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
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
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
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 ~16 to ~18 mm
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
ECRM 056-2D	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm
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	.	.	.	.	.	.	.	.	.	.	.	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 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
12L14		1	IARM Fe12L14-21	0.29	0.063	1.02	0.071	0.32	(0.0048)	0.0134	0.0177	0.056	0.0013	0.0035	0.0034	0.006
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	0.011	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	.	.	.	.	(0.0005)	.	.	.	.	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
IARM Fe12L14-21	0.0027	(0.0011)	.	Bi:0.0024	.	(0.0005)	0.012	0.0033	0.0013	(0.0004)	0.0032	0.0030	0.0009	Disc
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	0.020	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 31 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														

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	0.402				
20MnCr4		1	ECRM 197-1D	0.219	0.792	0.0073	0.0232	0.275	0.152	0.148	0.851	0.0313	0.0135	0.030	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)
41CA27		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	0.008	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)	(0.0003)	
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	0.018	0.91			0.166				
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	(0.0003)	(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 MOD		1	IARM 330B	0.82	0.0075	(0.003)	0.0027	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	0.907	0.028	0.0068	0.231	0.0080	0.0014	0.0033	0.0012
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	0.072	0.22	0.007	(0.002)	(0.0016)	(0.004)
4615		2	BS 51E	0.15	0.49	0.010	0.021	0.28	0.22	1.78	0.14	0.028	0.035	0.21	0.0078	0.0011	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	0.0086	(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	(0.0024)	(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														Disc 38 mm Ø x 25 mm
			IRSID 1750	0.0188	(0.0002)	(0.00002)	(0.0002)											Disc 38 mm Ø x 25 mm
			IRSID 1749	0.0134	(0.0005)	(0.0002)	(0.0002)											Disc 41 mm Ø x 25 mm
			BS 300A	0.0029	(0.00032)		0.0008	93.8										Disc 38 mm Ø x ~7 or 19+ mm
			BS 300B *	0.003	<0.005		<0.005	94.0										Disc 38 mm Ø x ~7 or 19+ mm
			IARM 340A	(0.004)	0.0004		(0.0004)											Disc 31 mm Ø x 2 mm
			IARM Fe300M-22	0.0038														Disc 38 mm Ø x ~7 or 19+ mm
			BS XCCV	0.0023														Disc 36 mm Ø x ~7 or 19+ mm
			IMZ 76	(0.001)														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)							Disc 36 mm Ø x ~7 or 19+ mm
			BS 3310	0.0058	(0.0008)		(0.001)	93.7										Disc 38 mm Ø x 25 mm
			BS 4130A	(0.005)	0.0002		0.0010	97.2										Disc 38 mm Ø x ~7 or 19+ mm
			IARM 143F	0.0051							(0.0015)	(0.003)						Disc 31 mm Ø x 2 or 18 mm
			SRM 1225															Disc 32 mm Ø x 19 mm
			IPT 501															Disc 34 mm Ø x 18 mm
			12X 41400B															

## 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
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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	0.0037	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	(0.002)	0.069	0.445	(0.009)	(0.013)	(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	0.067	0.0209	0.0057	(0.010)	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	1.04	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	4.94	(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			
IME 162	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 4 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)	.	.	.														

## 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	* Provisional	1	BS PM15B *	3.43	0.39	0.019	0.019	0.91	0.11	0.12	5.42	0.004	0.025	1.28	0.091	0.003	15.1	0.14
CPM15V	* Provisional	1	BS PM15A *	3.38	0.39	0.017	0.016	0.91	0.096	0.12	5.43	0.005	0.025	1.28	0.11	0.003	15.2	0.14
CPM15V	* Provisional	1	IARM FePM15V-18	3.51	0.39	0.022	0.010	0.89	0.084	0.123	5.5		0.018	1.24		0.027	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	17034	1	BS 37H	1.55	0.299	0.027	0.0009	0.305	0.207	0.356	11.7	0.010	0.022	0.784	0.028	0.0020	0.60	0.027
D-2		2	CT D2	1.53	0.48	0.013	0.005	0.40	0.07	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-6 AC		1	IARM FeD6AC-22	0.471	0.82	0.0068	(0.0019)	0.260	0.036	0.539	1.02	0.035	0.0050	0.98	0.0038	0.0021	0.108	0.0026
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	TMW 173	0.30	0.45	0.009	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
Alloy	ISO	#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Co	Mo	N	Ti	V	W
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	
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	4.90	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								



## 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)	.	(0.0011)	[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
BS PM15B *	0.004	0.0002	.	<0.005	[72.7]	.	0.015	0.019	.	.	0.005	<0.005	.	<0.005	Disc 51 mm Ø x -7 or 19+ mm
BS PM15A *	0.004	0.0002	.	<0.005	[72.6]	<0.005	0.015	0.019	.	.	0.003	.	.	<0.005	Disc 51 mm Ø x -7 or 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	0.0009	(0.0006)	0.0009	0.0010	.	.	.	Disc 34 mm Ø x 19 mm
BS 37H	0.0035	0.0003	.	0.0002	84.0	H:0.0002	0.0040	0.0013	<0.005	0.0010	0.0043	.	<0.005	<0.005	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)	(0.0018)	(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
IARM FeD6AC-22	0.0031	0.00023	.	.	.	.	0.0037	0.0010	(0.0020)	.	0.0019	.	.	.	Disc
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

Number	As	B	Bi	Ca	Fe	Mg	Nb	O	Pb	Sb	Sn	Ta	Zn	Zr	Units
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
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 38 mm Ø x 19 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 31 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)	(0.0005)	.	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 or 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
BS TS-5 *	<0.005	.	.	.	[96.1]	.	0.001	<0.005	.	.	0.002	.	.	.	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)	.	(0.001		

## 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
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 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		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	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 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	(0.0005)	0.0032	0.028	0.01	0.01
301		1	HRSD 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 NSBD	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 + Ca	17034	1	SS 468/1	0.143	1.70	0.014	0.020	1.41	.	8.90	17.96	.	0.018	.	.	.	.	.
304 L		1	BS C8304-4	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	FV 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 83C	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	0.396	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																		

## 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 17-4PHC	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 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	.	.	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 ~38 mm
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
DS2U 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 ~40 mm Ø x ~25 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
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	.	.	.	.	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 Fe321-22	0.048	1.46	0.0288	0.024	0.54	0.299	9.24	17.4	0.114	0.220	0.214	0.0115	0.56	0.096	0.024
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	0.118	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
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</														

## 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 Fe321-22	.	0.0061	.	.	.	0.018	.	.	.	.	0.0057	.	.	Disc
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 41 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 41 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 mm last
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
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 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				

## 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

Table with columns: Alloy, ISO, #, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Al, Co, Mo, N, Ti, V, W. Lists various steel alloys and their chemical compositions.

Table with columns: Alloy, ISO, #, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Al, Co, Mo, N, Ti, V, W. Continuation of alloy list.

Table with columns: Number, As, B, Ca, Ce, Fe, Mg, Nb, O, Pb, Sb, Se, Sn, Ta, Zn, Zr, Units. Lists mechanical units for various alloys.

Table with columns: Number, As, B, Ca, Ce, Fe, Mg, Nb, O, Pb, Sb, Se, Sn, Ta, Zn, Zr, Units. Lists mechanical units for various alloys.

Table with columns: Number, As, B, Ca, Ce, Fe, Mg, Nb, O, Pb, Sb, Se, Sn, Ta, Zn, Zr, Units. Lists mechanical units for various alloys.

## 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	<b>BS LC-7A</b>	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	<b>BS 50G</b>	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)	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
<b>BS LC-7A</b>	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 <b>17025, 17034</b>
<b>BS 50G</b>	0.0034	(0.0001)	(0.0002)	(0.0004)	(0.00007)	Sb:0.0005	(0.003)	(0.0003)	.	disc 38 mm Ø x 38 mm <b>17025, 17034</b>
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	<b>BS 1018</b>	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	<b>BS 1040</b>	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

Table with columns: #, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Al, Als, As, B, Ca, Co, Mo. Rows include materials like IRSID 1660, ECRM 099-1D, SRM 1227, SS 602/2, BS 64C, HRT FE2014-N, VS UG128, ECRM 556-2D, SRM 1224, VS UG129, VS RG28, VS RG28/1, IARM 373A, VS UG20/6, NM 309, SS 435/1, IARM Fe1050-18, SS 435/2, BS 55E, IRSID 1636, SS 459/2, BS 1045, IARM 2U0D, VS UG123, IRSID 1657, NM 306, IRSID 1648, NM EN-8, IRSID 1642, IRSID 1647, IARM 210D, IARM 349A, IRSID 1652, BS 1040, IRSID 1637, VS UG131, SS 605/2, IRSID 1644, ECRM 084-1D, IRSID 1649, SS 460/2, VS RG30, BS 1035, IRSID 1655, IRSID 1663, BS 1030A, VS UG90, VS UG19/6, IARM 360A, BS 1030, SS 452/1, IARM 209D, IRSID 1653, VS RG27, VS UG121, SS 434/2, IRSID 1654, BS 1026A, IARM 359A, VS UG94, VS UG18/6, HRT FE2016-N, IARM Fe1020-18, BS 1020B, BS 1020A, IMZ 112A, BS 1020, IARM ZT3C, IRSID 1664, SS 601/3, BS 57E, BS 1018, IARM 117B, BS 1018A, VS UG132, 12X 10180D, IARM 28K, BS 1016, 12X 10180C, BS 1016A, BS 1016B, NM 304A, TL 1000, VS RG25, VS UG124, VS UG109, IARM 213D, IMZ 71A, SS 456/3, VS UG93, VS UG122, VS UG17/6, VS UG120, SS 433/2, DSZU C041a, DSZU C041b, VS UG108, SRM 1228, ECRM 057-2D, IARM Fe1215-18, ECRM 083-2D, DSZU C03, VS RG26, SS 431/2, BS XCAS, BS XCAS-2, VS UG27/11, DSZU C040A, BS 1005, BS 1009, SS 1117/1, VS 005/2, SS 432/2, VS 003/1, CZ LA-1B, IMZ 110A, VS 004, VS 004/1, VS 002, VS 002/1

CARBON STEEL CONTINUED FROM THE PREVIOUS PAGE

Table with columns: Number, N, Nb, O, Pb, Sb, Sn, Ti, V, W, Zn, Zr, Units. Contains multiple rows of material specifications and chemical compositions.

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
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 075-2D	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)
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)

#	Number	As	Sb	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Als	N	Ti	V	W
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
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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	
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 20 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	0.015	.	.	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 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	
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	
Number	B	Bi	Ca	Ce	Co	Fe	Mo	Nb	O	Pb	Sn	Ta	Zn	Zr	Units	Comment
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	<0.0005	(0.0007)	38 mm Ø x ~7 or 19+ mm	17034
IARM FeP11-21	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 ~16 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

**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	.	.	<b>0.0360</b>	40 mm Ø x 40 mm
IMZ 131	0.0043	.	<b>0.0333</b>	40 mm Ø x 40 mm
IMZ 135	0.0274	0.0008	<b>0.0238</b>	40 mm Ø x 40 mm
IMZ 169	0.075	.	<b>0.0193</b>	40 mm Ø x 40 mm
IMZ 141	0.0071	.	<b>0.0154</b>	40 mm Ø x 40 mm
IMZ 130	0.0046	0.0024	<b>0.0153</b>	40 mm Ø x 40 mm
IMZ 139	(0.029)	0.0031	<b>0.0113</b>	40 mm Ø x 40 mm
IMZ 132	0.0021	0.0002	<b>0.0097</b>	40 mm Ø x 40 mm
IMZ 137	0.0017	0.00025	<b>0.0083</b>	40 mm Ø x 40 mm
IMZ 140	0.0307	0.0015	<b>0.0083</b>	40 mm Ø x 40 mm
IMZ 138	0.0022	.	<b>0.0063</b>	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	<b>BS 45B</b>	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
1	2.25Cr-1Mo	F-22	<b>BS 46B</b>	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	<b>BS 47A</b>	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	<b>BS 48B</b>	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

Table with columns: #, Number, Cr, Mo, C, Mn, P, S, Si, Cu, Ni, Al, As, Co, N, Sn, Ti, V, W. It lists various steel grades and their chemical compositions.

Table with columns: #, Number, B, Ca, Ce, Fe, La, Mg, Nb, O, Pb, Sb, Ta, Zn, Zr, Units, Comment. It provides additional chemical composition details and comments for the steel grades.





**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	<b>BS 74C</b>	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 I2144A	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	.	.	.
IARM	Fe12L14-21	0.29	0.063	1.02	0.071	0.32	(0.0048)	0.0134	0.0177	0.056	0.0013	0.0027	0.0035	0.0034	0.006	0.0013	0.0032
1	<b>BS 74D</b>	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	<b>BS 75G</b>	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	<b>BS 75F</b>	0.202	0.165	1.05	0.009	0.116	0.004	0.030	0.044	0.080	0.002	.	.	0.018	.	.	.
1	<b>BS 73C</b>	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	<b>BS 73D</b>	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	<b>BS 72B</b>	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	<b>BS 73B</b>	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	<b>BS 70B</b>	0.135	0.40	0.90	0.009	0.022	0.27	0.13	0.25	1.00	0.024	.	.	0.205	.	.	.
1	<b>BS 70C</b>	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
<b>BS 74C</b>	.	.	(<0.005)	.	.	.	.	.	12L14	41 mm Ø x ~7 or 19+ mm <b>17025</b>
14X I2144A	.	.	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm
CZ CM-15C	.	.	.	.	.	.	.	.	.	~39 mm Ø x 25 mm
CRM IARM Fe12L14-21	Bi:0.0024		(0.0005)	0.012	0.0033	(0.0004)	0.0030	.	12L14	Disc
<b>BS 74D</b>	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 <b>17025, 17034</b>
<b>BS 75G</b>	(0.0002)	(0.0002)	(0.0003)	0.0155	.	(0.0004)	0.0004	.	11L17	41 mm Ø x ~7 or 19+ mm <b>17025</b> Fe:[98.2]
<b>BS 75F</b>	.	.	.	.	.	.	.	.	11L17	40 mm Ø x ~7 or 19+ mm <b>17025</b> last
<b>BS 73C</b>	(0.0002)	(0.0005)	(0.002)	0.0013	(0.002)	0.0024	(0.006)	.	86L20	38 mm Ø x ~7 or 19+ mm <b>17025, 17034</b> Fe:[97.0]
CRM IARM Fe86L20-18	.	.	.	.	.	.	.	.	86L20	38 mm Ø x ~2 or 19 mm
<b>BS 73D</b>	(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 <b>17025, 17034</b> Fe: 97.1
<b>BS 72B</b>	.	.	(0.001)	.	.	(0.002)	.	.	41L50	37 mm Ø x ~7 or 19+ mm <b>17025</b>
<b>BS 73B</b>	.	.	.	.	.	.	.	.	86L20	41 mm Ø x ~12 or ~17 mm <b>25 (pre-17025)</b> last
<b>BS 70B</b>	.	.	.	.	.	.	.	.	41L40MOD	41 mm Ø x ~7 or 19+ mm <b>17025</b>
<b>BS 70C</b>	(0.0003)	.	<0.005	0.0020	(0.003)	0.0020	(0.0006)	.	41L40MOD	41 mm Ø x ~7 or 19+ mm <b>17025, 17034</b> 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	<b>BS 75F</b>	0.165	1.05	0.009	0.116	0.004	0.030	0.044	0.080	0.018	0.002	.	0.202	.	.	.
12L14	<b>BS 74B</b>	0.08	0.91	0.087	0.316	0.002	0.006	0.012	0.019	0.008	(0.002)	.	0.34	.	.	.
41L40	<b>BS 70B</b>	0.40	0.90	0.009	0.022	0.27	0.13	0.25	1.00	0.205	0.024	.	0.135	.	.	.
41L50	<b>BS 72B</b>	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	(2.23)	.	.	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	.	0.009	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	0.136	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
1	DSZU C013	.	.	.	.	.	.	.	(0.46)	.	.	.	.	.	.	.	.	.
1	VS LG68	.	.	.	.	.	.	.	0.46	.	.	.	.	.	.	.	.	.
1	IMZ 199	(0.001)	.	.	.	.	.	.	0.43	.	.	.	.	.	.	.	.	.
2	CZ SP-2D	(0.0008)	.	.	.	.	.	.	0.0163	.	.	.	.	.	.	.	.	.
1	IRSID 1833	(0.00017)	.	.	.	.	.	.	0.0026	.	0.00007	(0.0005)	.	(0.0014)	.	.	.	.
1	14X MN1AL	.	.	.	.	.	.	.	0.096	.	.	(0.011)	.	.	.	.	.	.
1	DSZU C012	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	BS 17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	BS 17A	.	.	.	.	.	.	.	0.06	.	.	.	.	.	.	.	.	.
1	NCS AH37335	.	.	.	0.011	.	.	.	0.077	.	.	.	.	.	.	.	.	.
1	VS LG69	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	DSZU C011a	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	IMZ 301	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	NCS AH37334	.	.	.	0.027	.	0.014	.	0.085	.	.	.	.	.	.	.	.	.
1	IMZ 198	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	DSZU C011	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	CZ SP-2C	(0.003)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	HRT FE2022-H	(0.0008)	.	.	.	.	.	.	(0.006)	.	.	.	.	.	.	.	.	.
1	14X MN4-21	(0.0029)	.	.	.	Rem	.	.	0.182	(0.0026)	.	.	.	(0.0104)	.	.	.	.
1	DSZU C023	(0.001)	.	.	.	.	.	.	(0.02)	.	.	.	.	.	.	.	.	.
1	DSZU C022	(0.001)	.	.	.	.	.	.	(0.01)	.	.	.	.	.	.	.	.	.
1	NCS AH37333	.	.	.	0.029	.	0.017	.	0.108	.	.	.	.	.	.	.	.	.
1	14X MN2S	.	.	.	.	.	.	.	0.23	.	.	(0.006)	.	.	.	.	.	.
1	DSZU C010	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	SS 493/3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Block 48 mm x 42 mm x 12 mm
1	14X MN3U	.	.	.	.	.	.	.	0.398	.	.	0.010	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
1	DSZU C020	(0.002)	.	.	.	.	.	.	(0.02)	.	.	.	.	.	.	.	.	Disc ~39 mm Ø x 20 mm
1	14X MN5U	.	.	.	.	.	.	.	0.102	.	.	(0.007)	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
2	BS 19A	.	.	.	.	.	.	.	0.040	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 17 mm
1	SS 492/3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Block 48 mm x 42 mm x 12 mm
1	14X MN5V	.	.	.	.	.	.	.	0.041	.	.	(0.004)	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
1	12X 354B	.	.	.	.	.	.	.	0.0802	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
1	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
1	IARM 196A	0.0017	.	0.0002	.	.	.	.	0.087	0.0021	0.001	0.006	.	.	0.006	.	.	Disc 31 mm Ø x 18 mm
2	BS 40B	0.0006	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 41 mm Ø x ~7 or 19+ mm
2	CZ CM-9B	(0.004)	.	.	.	.	.	.	(0.06)	.	(0.002)	(0.003)	.	.	(0.003)	.	.	Disc ~39 mm Ø x 25 mm
2	DSZU C043A	(0.001)	.	0.0004	.	.	.	.	0.006	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 25 mm
1	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
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RESULFURIZED STEEL CONTINUED ON THE NEXT PAGE

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

Table with columns: #, Number, S, C, Mn, P, Si, Cu, Ni, Cr, Al, As, Co, Mo, N, Sn, Ti, V. Contains chemical composition data for various steel grades like 14X FeNi40C, BS 66K, etc.

Table with columns: #, Number, S, C, Mn, P, Si, Cu, Ni, Cr, Mo, Al, Co, N, Sn, V, As. Includes a section for 'RM RESULFURIZED STEEL XRF SET' with Part Number: BS RESUL-4 and AVAILABLE INDIVIDUALLY. Lists grades like 1117, 1140 + P, 1141, 1215.

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	<0.005	.	(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)	.	(0.003)	(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	<0.005	.	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
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## 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	0.0066	.	.	.	.	.	.	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 UG11	.	.	.	.	.	.	.	.	.	.	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 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	<0.005	Disc 57 mm Ø x ~7 or 19+ mm	17034
14X MN5U	.	.	.	.	.	0.102	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm	
BS 19A	.	.	.	.	.	0.040	.	.	.	.	.	.	.	Disc 32 mm Ø x 17 mm	

Number	B	Ca	Ce	Fe	Mg	Nb	O	Pb	Sb	Ta	W	Zn	Zr	Units	Comment
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	
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 40 mm Ø x 40 mm	
CT H13	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 mm	
ECRM 276-2D	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 30-35 mm Ø x ~16 mm	
BS 41	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm	
BS 41	.	0.0006	.	.	.	.	0.002	.	.	.	<0.003	.	.	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	.	.	.	.	.	.	0.002	.	.	.	<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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## LOW ALLOY STEEL CHART 1 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 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
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	last
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	.	(0.0002)	.	0.115	.	.	0.071	.	0.022	0.052	.	0.116	0.007	.	Disc ~39 mm Ø x 25 mm	
IMZ 118	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	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	.	.	.	.	.									

LOW ALLOY STEEL CHART 2 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	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												

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	1.90	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 UC116	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	1.062	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 UC79	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	0.023	.	0.0055	0.242	(0.007)	0.0083	0.0010	0.0047
1	VS UC3/10	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	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 41 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 31 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 UC116	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	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	
IME 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	

LOW ALLOY STEEL CHART 4 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	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
1	12X 349-23	0.320	0.49	0.0121	0.006	0.18	0.167	0.277	0.178	0.059	.	0.0121	0.090	(0.0092)	0.117	0.079	0.031
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	12X 356-23	0.30	0.242	0.061	0.036	0.28	0.431	0.101	0.261	0.106	.	0.023	0.0402	0.019	0.042	0.021	0.069
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
1	12X 12700A	0.0014	.	.	.	0.0047	.	.	.	.	.	.	.	0.0120	.	.	Disc ~50 mm Ø x ~20 mm
1	IMZ 115	.	.	.	.	.	.	0.09	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm
1	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
1	IMZ 114A	0.0019	.	.	.	0.0057	.	0.015	.	0.021	0.018	.	(0.007)	(0.006)	.	.	Disc 38 mm Ø x 20 mm
1	12X 352E	.	.	.	.	0.025	.	0.063	.	.	.	(0.018)	0.275	.	.	.	Disc ~40 mm Ø x ~15 mm
2	TL 1100	.	.	.	.	0.0283	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 20 mm
1	VS UG90	.	.	.	.	.	.	.	.	.	0.0011	.	.	.	.	.	Disc ~47 mm Ø x ~30 mm
2	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
1	12X 349-23	.	.	.	.	0.026	.	0.005	.	.	.	.	0.093	.	(0.0043)	.	Disc 40 mm Ø x 15 mm
2	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
1	12X 41300A	.	.	.	.	.	.	.	.	.	.	.	.	0.0012	.	.	Disc ~38 mm Ø x ~15 mm
1	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
1	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
1	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
1	SS 219/4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm
1	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
1	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
2	HRT FE2010-N	.	.	.	.	0.012	.	.	.	.	.	.	(0.014)	.	.	.	Disc 40 mm Ø x 20 mm
1	SS 222/1	.	.	.	.	0.0379	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 19 mm
1	IARM 143F	.	.	.	.	0.010	.	(0.0015)	(0.003)	.	.	.	(0.003)	.	.	.	Disc 31 mm Ø x 2 or 18 mm
1	IARM 330B	.	.	.	.	0.013	.	(0.002)	.	.	.	.	0.024	.	.	.	Disc 31 mm Ø x 2 or 18 mm
1	VS UG35/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~28 mm
1	VS RG27	.	.	.	.	0.071	.	.	.	.	.	.	0.170	.	.	.	Disc ~45 mm Ø x ~28 mm
1	VS UG3/11	.	.	.	.	0.072	.	.	.	.	.	.	0.176	.	.	.	Disc ~45 mm Ø x ~28 mm
1	12X 356-23	0.0012	(0.0003)	.	.	0.117	.	0.022	.	0.020	0.020	Se:0.007	0.092	0.005	0.010	.	Disc 40 mm Ø x 15 mm
1	VS UG7/5	.	.	.	.	.	.	(0.1)	.	.	.	.	0.35	.	.	.	Disc ~45 mm Ø x ~28 mm
1	12X 16604A	.	.	.	.	0.0366	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
1	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
1	SRM 1269	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
1	ECRM 086-1D	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Disc 38 mm Ø x 25 or 30 mm
2	CZ CM-3A	0.0002	.	.	.	0.012	.	0.006	.	.	.	.	0.015	.	.	.	Disc ~39 mm Ø x 25 mm
1	IRSID 1745	.	.	.	.	.	.	.	.	.	.	.	.	(0.003)	.	.	Disc 48 mm Ø x 30 mm
1	VS UG9/10	.	.	.	.	.	.	.	.	.	.	.	1.34	.	.	.	Disc ~45 mm Ø x ~28 mm
1	VS RG27/1	.	.	.	.	0.025	.	.	.	.	.	.	0.170	.	.	.	Disc ~45 mm Ø x ~28 mm
1	DSZU C05b	0.018	.	.	.	0.179	.	0.170	.	.	.	.	0.53	.	.	.	Disc 40 mm Ø x 25 mm
1	IPT 501	.	.	.	.	0.008	.	.	.	.	.	.	.	.	.	.	Disc 34 mm Ø x 18 mm
1	IARM 378A	(0.0006)	.	.	.	0.013	.	(0.003)	.	.	.	.	(0.006)	.	.	.	Disc 31 mm Ø x 2 or 18 mm
1	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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LOW ALLOY STEEL CHART 5 of 8

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

Table with columns: #, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Al, Als, As, Mo, N, Sn, Ti, V. It lists various steel grades and their chemical compositions.

Table with columns: #, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Al, Als, As, Mo, N, Sn, Ti, V. This table continues the list of steel grades and their compositions from the previous section.

Table with columns: Number, B, Bi, Ca, Ce, Co, Fe, Mg, Nb, O, Pb, Sb, Ta, W, Zn, Zr, Units, Comment. It provides additional details such as impurity levels and processing units for the steel grades.

LOW ALLOY STEEL CHART 6 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 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	0.0008	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	0.049	.	.	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)	(0.016)
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 XCCCT	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
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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	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.169	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)	(0.0005)	(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 XCCCT	.	.	.	.	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 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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LOW ALLOY STEEL CHART 7 of 8

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

Table with 18 columns: #, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Al, Als, As, Mo, N, Sn, Ti, V. Contains chemical composition data for various steel grades like BS 46B, HRT FE2009-N, IMZ 75A, etc.

Table with 18 columns: #, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Al, Als, As, Mo, N, Sn, Ti, V. Continuation of chemical composition data.

Table with 20 columns: Number, B, Bi, Ca, Ce, Co, Fe, Mg, Nb, O, Pb, Sb, Ta, W, Zn, Zr, Units, Comment. Contains mechanical and dimensional data for steel grades, including units like mm and comments like 'last' or 'La: 0.0076'.



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	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	

**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 XCCV	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)

## 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	0.07	7.25	1.00	0.004	0.01	0.085	4.40	0.0015



TOOL STEEL CHART 2 of 4

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

Table with 18 columns: #, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Al, Co, Mo, N, Ti, V, W. Rows include grades like IARM 324A, BS 36E, BS 36D, BS 36C, CT A2, CZ LA-4C, SS 485/1, IARM 320A, CT 01, ECRM 290-1D, CT M10, BS 35D, HRT FE2023-N, BS TM1, IARM 304A, IARM FeM2-18, 14X 14946D, BS 32D, IARM FeM1-18, IARM 306B, SRM 1157, BS M-50, 14X 14948C, CT M2, IARM 44C, CT M1, IARM FeT1-18, BS 30D, IARM 281A, SS 486/1, CZ HS-1A, IARM 40C, IARM FeL6-18, BS 40B, DSZU C076, IARM 40B, BS 39B, DSZU C078, SS 483/1, BS 38C.

Table with 18 columns: Number, As, B, Ca, Fe, Mg, Nb, O, Pb, Sb, Sn, Ta, Zn, Zr, Units, Comment. Rows include grades like IARM 324A, IARM 39B, IARM 39C, BS 36E \*, BS 36D, BS 36C, CT A2, CZ LA-4C, SS 485/1, IARM 320A, CT 01, ECRM 290-1D, CT M10, BS 35D, HRT FE2023-N, BS TM1, IARM 304A, IARM FeM2-18, 14X 14946D, BS 32D, IARM FeM1-18, IARM 306B, SRM 1157, BS M-50, 14X 14948C, CT M2, IARM 44C, CT M1, IARM FeT1-18, BS 30D, IARM 281A, SS 486/1, CZ HS-1A, IARM 40C, IARM FeL6-18, BS 40B, DSZU C076, IARM 40B, BS 39B, DSZU C078, SS 483/1, BS 38C.

TOOL STEEL CHART 3 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	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 TS-5 *	0.58	0.63	0.006	0.002	1.89	0.035	0.046	0.20	0.035	0.004	0.27	0.006	0.006	0.20	0.006
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	IARM FeD6AC-22	0.471	0.82	0.0068	(0.0019)	0.260	0.036	0.539	1.02	0.035	0.0050	0.98	0.0038	0.0021	0.108	0.0026
1	BS D-6A	0.47	0.78	0.0076	0.0010	0.232	0.136	0.060	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
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	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 TS-5 *	<0.005	.	.	[96.1]	.	0.001	<0.005	.	.	0.002	.	.	.	Disc 38 mm Ø x ~7 or 19+ mm	* Provisional
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
IARM FeD6AC-22	0.0031	0.00023	.	.	.	0.0037	0.0010	(0.0020)	.	0.0019	.	.	.	Disc	
BS D-6A	0.0101	0.0004	0.0011	95.6	(0.00014)	<0.001	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	

TOOL STEEL CHART 4 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	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	(0.017)	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	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	

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	0.18	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
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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
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## 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	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	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		0.118	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	
	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	
	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	



**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	0.020	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
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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
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**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	.	.	.	.	last



## 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 35 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 mm	last
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 16 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

Table with 17 columns: #, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Co, Mo, N, Nb, Sn, Ti, V, W. Rows include various grades like CZ SP-8B, VS LG58, SRM C1153a, etc.

Table with 18 columns: #, Number, Al, As, B, Ca, Fe, Mg, O, Pb, Sb, Ta, Zr, Units, Comment. Rows include grades like CZ SP-8B, VS LG58, SRM C1153a, etc. with specific units and comments.

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

Number	Al	As	B	Ca	Ce	Fe	Mg	O	Pb	Sb	Ta	Zr	Units	Comment
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## 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	0.249	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	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	DS2U 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	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
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
DS2U 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	

STAINLESS AND HIGH ALLOY STEEL, CHART 4 of 7

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

Table with 18 columns: #, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Co, Mo, N, Nb, Sn, Ti, V, W. Rows list various steel grades like SS 475, IARM 318B, ECRM 269-1D, IARM FeINVR36-22, VS LG64, IARM 8H, IARM 6i, ECRM 289-1D, BS 85D, IARM Fe321-22, IMZ 150A, IARM 4F, PV 112/1, 13X 14211R, 13X 32100A, BS 188B, IARM 4G, 13X 14418A, BS CD4MCU, NCS HS28748, IARM 6J, BS CA304-1, SRM 1230, IARM 4E, 13X PH2S143A, 13X 18004C, CZ SL-3A, IARM 8i, 13X 14216P, HH 5179A, VS LG70, IARM 8G, HRT FE2021-H, NILAB 500HA D, IARM Fe174PH-18, BS 186A, 13X 12538J, NCS HS28741, 13X 33425A, 13X 14207L.

Table with 18 columns: #, Number, Al, As, B, Ca, Fe, Mg, O, Pb, Sb, Se, Ta, Zn, Zr, Units, Comment. Rows list the same steel grades as the first table, providing detailed impurity levels and specifications. For example, SS 475 has Al 0.013, As (0.004), B, Ca, Fe, Mg, O, Pb, Sb, Se, Ta, Zn, Zr, Units (38 mm Ø x 19 mm), Comment (last of stock).









STAINLESS AND HIGH ALLOY STEEL XRF SETS

AVAILABLE IN SETS OR INDIVIDUALLY

~7 thick mm discs

Table with 17 columns: Grade, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Co, Mo, N, Ti, V, W. Lists various stainless and high alloy steel grades and their chemical compositions.

Table with 17 columns: Grade, Number, C, Mn, P, S, Si, Cu, Ni, Cr, Co, Mo, N, Ti, V, W. Lists various stainless and high alloy steel grades and their chemical compositions, including additional elements like Al, As, B, Ca, Fe, Nb, O, Pb, Sb, Se, Sn, Zr, and 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	.	.	.	<b>0.083</b>	0.0979	0.1069	0.0486
1	SCRM 667/13	3.04	0.222	.	.	2.866	0.497	1.303	0.294	.	0.110	.	<b>0.070</b>	.	.	0.103
1	<u>BS 286CI</u>	3.27	0.714	0.20	(0.012)	2.00	0.363	1.43	0.349	0.012	(0.03)	0.027	<b>0.052</b>	0.258	0.052	0.150
1	<u>BS 286CH</u>	3.27	0.714	0.20	(0.012)	2.00	0.363	1.43	0.349	0.012	(0.03)	0.027	<b>0.051</b>	0.258	0.052	0.150
1	<u>BS 286CG</u>	3.27	0.714	0.20	(0.012)	2.00	0.363	1.43	0.349	0.012	(0.03)	0.027	<b>0.050</b>	0.258	0.052	0.150
1	<u>BS 286CF</u>	3.27	0.714	0.20	(0.012)	2.00	0.363	1.43	0.349	0.012	(0.03)	0.027	<b>0.049</b>	0.258	0.052	0.150
1	<u>BS 286CE</u>	3.27	0.714	0.20	(0.012)	2.00	0.363	1.43	0.349	0.012	(0.03)	0.027	<b>0.048</b>	0.258	0.052	0.150
1	<u>BS 291HJ</u>	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.040	.	(0.004)	<b>0.046</b>	0.030	0.0223	0.0206
1	<u>BS 291HI</u>	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.039	.	(0.004)	<b>0.045</b>	0.030	0.0223	0.02061
1	<u>BS 291HH</u>	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.038	.	(0.004)	<b>0.044</b>	0.030	0.0223	0.0206
1	<u>BS 291HG</u>	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.037	.	(0.004)	<b>0.043</b>	0.030	0.0223	0.0206
1	<u>BS 291HF</u>	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.036	.	(0.004)	<b>0.042</b>	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	.	<b>0.0414</b>	0.0110	0.0820	0.0125
1	<u>BS 291HE</u>	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.035	.	(0.004)	<b>0.041</b>	0.030	0.0223	0.0206
1	<u>BS 285CT</u>	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.021	.	(0.005)	<b>0.040</b>	0.190	0.044	0.133
1	<u>BS 291HD</u>	3.35	0.535	0.024	0.008	2.31	0.212	0.101	0.035	0.035	.	(0.004)	<b>0.040</b>	0.030	0.0223	0.0206
1	<u>BS 285CH</u>	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.021	.	(0.005)	<b>0.039</b>	0.190	0.044	0.133
1	<u>BS 285CG</u>	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.021	.	(0.005)	<b>0.038</b>	0.190	0.044	0.133
1	<u>BS 285CF</u>	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.021	.	(0.005)	<b>0.037</b>	0.190	0.044	0.133
1	<u>BS 285CE</u>	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.020	.	(0.005)	<b>0.036</b>	0.190	0.044	0.133
1	<u>BS 285CD</u>	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.020	.	(0.005)	<b>0.035</b>	0.190	0.044	0.133
1	<u>BS 285CC</u>	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.020	.	(0.005)	<b>0.034</b>	0.190	0.044	0.133
1	<u>BS 285CB</u>	3.30	0.701	0.047	0.008	1.94	0.31	1.27	1.00	0.019	.	(0.005)	<b>0.033</b>	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	.	<b>0.032</b>	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	.	<b>0.023</b>	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	.	<b>0.009</b>	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)	<b>0.006</b>	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			
	<u>BS 286CI</u>	(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	<b>17034</b>			
	<u>BS 286CH</u>	(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	<b>17034</b>			
	<u>BS 286CG</u>	(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	<b>17034</b>			
	<u>BS 286CF</u>	(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	<b>17034</b>			
	<u>BS 286CE</u>	(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	<b>17034</b>			
	<u>BS 291HJ</u>	(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	<b>17034</b>			
	<u>BS 291HI</u>	(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	<b>17034</b>			
	<u>BS 291HH</u>	(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	<b>17034</b>			
	<u>BS 291HG</u>	(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	<b>17034</b>			
	<u>BS 291HF</u>	(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	<b>17034</b>			
	SCRM 670/25	.	.	.	.	.	.	.	.	.	.	.	48 mm x 42 mm x 12 mm				
	<u>BS 291HE</u>	(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	<b>17034</b>			
	<u>BS 285CT</u>	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	<b>17034</b>			
	<u>BS 291HD</u>	(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	<b>17034</b>			
	<u>BS 285CH</u>	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	<b>17034</b>			
	<u>BS 285CG</u>	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	<b>17034</b>			
	<u>BS 285CF</u>	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	<b>17034</b>			
	<u>BS 285CE</u>	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	<b>17034</b>			
	<u>BS 285CD</u>	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	<b>17034</b>			
	<u>BS 285CC</u>	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	<b>17034</b>			
	<u>BS 285CB</u>	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	<b>17034</b>			
	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
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## 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	NCS HS11013	3.70	0.305	0.038	0.0040	2.29	0.126	0.047	0.033	0.049	.	0.032	0.046	0.0030	0.0010	0.033	0.431
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	NCS HS11012	3.61	0.471	0.050	0.018	2.43	0.405	0.104	0.294	0.037	.	0.141	0.039	0.042	0.227	0.093	0.254
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	.	0.010	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
#	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mg	Te	Al	Ce	Co	Mo	Ti	V
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
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 ChM3	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	NCS AH11377	2.13	0.722	0.47	0.027	4.03	0.344	0.144	0.136	0.049	.	.	0.019	.	0.063	0.056	0.062
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  $\varnothing$  x 17-35 mm      CZ: 40 mm  $\varnothing$  x 18 mm      NCS: 32 mm  $\varnothing$  x 19-28 mm      SCRM: 48 mm x 42 mm x 12 mm  
SRM: 32 mm  $\varnothing$  x 19 mm      VS ChM: ~39 mm  $\varnothing$  x ~39 mm      VS ChG: ~34 mm x ~35 mm X ~22 mm      Y: 30 mm  $\varnothing$  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
<del>CZ SPL17 43A</del>	.	<del>0.0014</del>	<del>(0.002)</del>	.	.	.	<del>0.008</del>	<del>0.014</del>	<del>(0.004)</del>	.	<del>0.067</del>	<del>0.038</del>	<del>Zn:0.013</del>	.
<del>CZ SPL17 42A</del>	.	<del>0.0036</del>	<del>(0.002)</del>	.	.	.	<del>0.045</del>	<del>0.020</del>	<del>0.015</del>	.	<del>0.027</del>	<del>0.020</del>	<del>Zn:0.013</del>	.
<del>Y 451045</del>	.	.	.	.	.	.	.	.	.	.	.	.	.	last
SCRM 668/14	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Y 2863-12	(0.0097)	0.0078	.	.	.	.	0.21	(0.056)	(0.471)	.	(0.307)	0.13	.	.
<del>CZ 02033 2f</del>	.	<del>0.0020</del>	<del>(0.002)</del>	.	.	.	.	<del>0.005</del>	<del>0.028</del>	.	<del>0.014</del>	<del>(0.003)</del>	<del>(0.005)</del>	<del>Zn:0.018</del>
VS ChG 25/1	.	.	.	.	.	.	.	.	0.067	.	0.011	.	.	.
NCS HS11013	0.0019	0.0015	Al.Sol:0.031	.	.	0.012	(0.0006)	.	0.020	.	0.024	.	.	.
CZ 02033 3c	(0.007)	0.0044	(0.002)	.	.	.	.	0.005	.	.	0.009	(0.003)	.	.
NCS HS11012	0.0046	0.061	Al.Sol:0.140	.	.	0.0087	0.014	.	0.060	.	0.100	.	.	.
SCRM 666/12	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VS ChG 27/1	.	.	.	.	.	.	.	.	0.036	.	0.125	.	.	.
Y 4510058B-18	0.0021	0.024	.	.	.	.	.	.	.	.	.	.	.	.
<del>Y 4510058C-18</del>	<del>0.0021</del>	<del>0.024</del>	.	.	.	.	.	.	.	.	.	.	.	.
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)	.

Number	As	B	Bi	Ca	Fe	La	Nb	Pb	Sb	Se	Sn	W	Zr	Other
VS ChG 28	.	.	.	.	.	.	.	.	0.015	.	0.0017	.	.	.
VS ChG 28/1	.	.	.	.	.	.	.	.	.	.	0.0017	.	.	.
<del>CZ 02033 1f</del>	.	<del>0.0043</del>	<del>(0.001)</del>	.	.	.	.	<del>0.009</del>	.	.	<del>0.030</del>	<del>0.022</del>	<del>(0.008)</del>	.
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
<del>CZ 20034 13a</del>	<del>(0.002)</del>	.	.	.	.	.	.	.	<del>(0.002)</del>	.	<del>0.014</del>	<del>(0.003)</del>	<del>0.029</del>	.
CZ 20034 13b	(0.002)	.	.	.	.	.	.	.	(0.002)	.	0.014	(0.003)	0.023	.
<b>BS CC-11A</b>	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)	<b>17034</b>
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)	.
<b>BS CC-11B</b>	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	<b>17034</b>
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	.	.	.	.	.	.	.	.	.	.	.	.	.	.
NCS AH11377	.	.	.	.	.	0.011	.	.	0.039	.	0.168	.	.	.
Y 2863-7	(0.021)	0.100	.	.	.	.	0.041	(0.0025)	(0.010)	.	(0.0073)	.	.	.

Number	As	B	Bi	Ca	Fe	La	Nb	Pb	Sb	Se	Sn	W	Zr	Other
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BS: 28-34 mm Ø x 17-35 mm      CZ: 40 mm Ø x 18 mm      NCS: 32 mm Ø x 19-28 mm      SCRM: 48 mm x 42 mm x 12 mm  
 SRM: 32 mm Ø x 19 mm      VS ChM: ~39 mm Ø x ~39 mm      VS ChG: ~34 mm x ~35 mm X ~22 mm      Y: 30 mm Ø x 30 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	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	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	
<b>BS WI-2</b>	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	<b>17025</b>
SRM CII45	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)	
<b>BS WI-1</b>	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	<b>17025</b>

Number	Al	As	B	Bi	Ca	Fe	Mg	Pb	Sb	Sn	W	Zr	Units
<b>BS WI-2</b>	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 CII45	(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
<b>BS WI-1</b>	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	.	.
1	NCS HS92744d	3.57	0.460	0.045	0.014	1.57	0.293	0.642	0.534	0.023	.	0.043	0.0064	0.042	.	.
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	<b>BS CC-23</b>	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	TIIX CI-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
	NCS HS92744d	0.0033	0.030	.	.	0.291	.	.	0.024	0.024	0.039	0.211	.	.	.	30 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
	<b>BS CC-23</b>	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 <b>17034</b>
	TIIX CI-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
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## CAST IRON WITH C &gt; 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													

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 x 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 HPC40	.	.	.	.	.	.	.	.	.	.	.	.	.	.	~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
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 x ~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
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## CAST IRON WITH C &lt; 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
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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
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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	<b>BS PM15</b>	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
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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	
<b>BS PM15</b>	.	.	0.0330	0.014	0.109	(0.0005)	38 mm Ø x 19+ mm	<b>17025</b> 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
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## 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	C	Mn	P	S	Si	Cu	Ni	Cr	Al	Mo	Pb	Sn	Ti	V	Mg	N
	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										
	Number	B	Ce	Co	Nb	W	Units		Other								

## 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 FO19-2AB	4.04	1.05	1.05	0.032	0.057	.	.	.	.	.	.	.	.	.	.
CTIF FO19-2CD	4.02	1.05	1.05	0.0300	0.057	0.0298	(0.075)	0.0420	.	0.0392	.	0.0012	0.029	0.0419	.
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 PAL 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	.	.	.	.
Number	C	Si	Mn	P	S	Cu	Ni	Cr	Al	Co	Mo	Sn	Ti	V	W
CTIF NR 3S	2.92	2.91	0.77	0.024	.	0.33	24.63	3.05	.	.	.	.	.	.	.
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	.	.	.	.	.	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 F019-2AB	.	.	.	.	.	.	.	.	.	0.0005	.
CTIF F019-2CD	.	.	.	.	.	0.0070	.	.	.	(0.0005)	.
CTIF F012	.	.	.	.	.	.	.	.	.	.	.
CTIF F08	.	.	.	.	.	.	.	.	.	.	.
CTIF FCR7	.	.	.	.	.	.	.	.	.	.	.
CTIF F06	.	.	.	.	.	.	.	.	.	.	.
CTIF F010	.	.	.	.	.	.	.	.	.	.	.
CTIF NH3	.	.	.	.	.	.	.	.	.	.	.
CTIF F011	.	.	.	.	.	.	.	.	.	.	.
CTIF F018-2	.	.	.	.	.	0.004	.	.	.	.	.
CTIF NH7-1	.	.	.	.	.	.	.	.	.	.	.
CTIF FCR5	.	.	.	.	.	.	.	.	.	.	.
CTIF FT2-1	.	.	.	.	.	.	.	.	.	.	.
CTIF F018-1	.	.	.	.	.	.	.	.	.	.	.
CTIF NiMo1	.	.	.	.	.	.	.	.	.	.	.
CTIF FL7	(0.0266)	(0.010)	.	(0.010)	.	0.0035	.	.	.	.	.
CTIF FT3	.	.	.	.	.	.	.	.	.	.	.
CTIF NH7-2	.	.	.	.	.	.	.	.	.	.	.
CTIF F05	.	.	.	.	.	.	.	.	.	.	.
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 F017	.	.	.	.	.	.	.	.	.	.	.
CTIF PAL 1	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 3L	.	.	.	.	.	.	.	.	.	.	.
CTIF NH1	.	.	.	.	.	.	.	.	.	.	.
CTIF NH8	.	.	.	.	.	.	.	.	.	.	.
Number	As	B	Bs	Bi	Ce	N	Nb	Pb	Sb	Te	Zn
CTIF NR 3S	.	.	.	.	.	.	.	.	.	.	.
CTIF FT1	.	.	.	.	.	.	.	.	.	.	.
CTIF NR 8L	.	.	.	.	.	.	.	.	.	.	.
CTIF NH4	.	.	.	.	.	.	.	.	.	.	.
CTIF F04	.	.	.	.	.	.	.	.	.	.	.
CTIF FCR2	.	.	.	.	.	.	.	.	.	.	.
CTIF FL5	.	(0.002)	.	(0.0005)	.	.	.	.	.	.	.
CTIF FCR Ni3	.	.	.	.	.	.	.	.	.	.	.
CTIF NH6	.	.	.	.	.	.	.	.	.	.	.
CTIF F09	.	.	.	.	.	.	.	.	.	.	.
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 F07-2	.	.	.	.	.	0.0113	.	.	.	.	.
CTIF NR 4L	.	.	.	.	.	.	.	.	.	.	.
CTIF F07-3	.	.	.	.	.	.	.	.	.	.	.
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	ALLOY	ISO?	NUMBER	ALLOY	ISO?	NUMBER
1.0812		ECRM 191-2D	15-5PH		IARM Fe155PH-18	314		IMZ 165
1.2344		ECRM 271-1D	15-5PH		ECRM 273-1D	314		IMZ 166A
1.4410		ECRM 298-2D	16MnCr5		PV 102/1	316 H		CT 316
1.4435, 1.4436		JK 27B	17-4PH		13X PH2	316 H		NILAB 500HAD
1.5415		HRT FE2012-N	17-4PH	17034	BS 17-4PHC	316 L	17034	BS 316G
1.6587		HRT FE2013-N	17-4PH		IARM Fe174PH-18	316 L		CZ SL-2A
1.7149	20MnCrS5	ECRM 187-2D	17-4PH		SRM C2400	316 L		IARM 163E
1.7160		ECRM 194-1D	17-7PH		13X PH17700	316 L		IARM Fe316L-23
1.8550		ECRM 129-3D	17-7PH 25(preceeded 17025)		BS 192	316 L		SRM 1155A
1.8519		HRT FE2010-N	17-7PH 25(preceeded 17025)		BS 192A	316 L		SS 466/2
1005	17034	BS 1005	17-7PH		IARM Fe177PH-18	316 MOD		TL 2002
1005		DSZU C040a	182FM		BS 150	316 Ti		IRSID 1821
1005		ECRM 064-2D	18Cr2Ni12Mn		CT ISO035A	316 Ti		PV 112/1
1005		SRM 1765	201		BS 191	316 Ti		VS LG72
1005		SRM 1766	201		SRM 1297	317 L	17034	BS 317L
1005		SS 111/1	20Cb3		BS 187A	317 L	25(pre-17025)	BS 9941
1006		IRSID 1670	20Cb3		CT 20 Cb-3	317 L	25(pre-17025)	BS 9942
1008	17034	BS XCAS	20MoCr4		ECRM 197-1D	317 L		IARM 153C
1008		ECRM 057-2D	2101		IARM 292A	318	17034	BS 2205A
1009	17034	BS 1009	21Cr6Ni9Mn		CT ISO129A	321		13X 32100
1009 + Al	17034	BS XCCS-2	2205		13x NSA9	321	17034	BS 85D
100C6		IRSID 1747	2205	17034	BS 2205A	321	17034	BS 321D
1010		IMZ 111	2205		IARM 212D	321		IARM 61
1011		IMZ 73	2205		HRT FE2000-H	321		IARM FE321-22
1012, 1013	17034	IMZ 71A	2205		IARM FE2205-18	321		SRM 1171
1016		BS 1016	2304		IARM 317A	321		SS 465/1
1016		BS 1016A	2507	17034	BS 2507	321 - Ti		IMZ 152
1016		BS 1016B	2507		IARM 301B	32750		13X NSA13
1017		IMZ 112B	2507		IARM Fe2507-21	3310	17034	BS 3310
1017		IRSID 1664	253 MA	25(pre-17025)	BS 253	347		13X 34700
1018		12X 10180C	253 MA		IARM 316A	347		BS 347A
1018		12X 10180D	254 SMO	17034	BS 254	347		BS 347B
1018	17034	BS 1018	254 SMO		IARM Fe254SMO-21	347	17034	BS 347C
1018	17034	BS 1018A	254 SMO		NILAB 501HAD	347		IARM 8G
1018		ECRM 087-1D	255, Duplex		IARM 239C	347		IARM 8H
1018		IARM 28K	300M	17034	BS 300A	347		IARM 8i
1020	17025	BS 1020	300M		BS 300B	347 H		BS 87F
1020		BS 1020A	300M		IARM 340A	348	17025	SRM 1172
1020		BS 1020B	300M		IARM Fe300M-22	355		BS 355
1020		BS 57F	301		IARM 289A	355		IARM 335A
1020		IARM Fe1020-18	301		IARM 289B	35MV7		IRSID 1750
1023		IMZ 112A	301		IRSID 1819	405		SRM 1295
1026	17034	BS 1026A	302		IARM 241D	408		13X 40800A
1026		IARM 359A	302 HQ		IARM 234C	409		13X 40900
1030	17025	BS 1030	303		13X 30300	409		13X 40930
1030	17034	BS 1030A	303	17025	BS 303	409		IARM Fe409-20
1030		IARM 209D	303		CT 303	409 + Cr		NCS HS20743
1033		IRSID 1663	303		CZ SP-1A	410		13X 41008
1035	17034	BS 1035	303		IARM Fe303-18	410	25(pre-17025)	BS 0021
1035		IARM 360A	303 Se		IARM 253A	410, F6NM	25(pre-17025)	BS 0022
1039		IRSID 1637	303 Se		IARM 253B	410	17034	BS 410C
1040	17034	BS 1040	304 H		13X NSB1	410		CT 410
1040		IARM 210D	304 H + Ca	17034	BS CA304-4	410		IARM Fe410-18
1040		IRSID 1657	304 H		CT 304	410 + Mo		ECRM 296-1D
1042		IRSID 1656	304 H		IARM Fe304H-18	410 + Mo		IMZ 161
1042		NM EN-8	304 H		SS 468/1	410 H		13X 41001
1043		IRSID 1652	304 L		13X 30403	4130	17034	BS 4130A
1045	17034	BS 1045	304 L	17034	BS 304C	4130		IARM 143F
1045		BS 56E	304 L		IARM 162D	4130		SRM 1225
1045		IARM 200D	304 L		IARM Fe304L-22	4130 H		IPT 501
1045		IPT 503	304 L		ECRM 287-1D	4140		12X 41400
1050		IARM Fe1050-18	304 L		ECRM 292-1D	4140	25(pre-17025)	BS 1962
1060		IARM 373A	304 L		IARM 162D	4140	17034	BS 4140C
1069		ECRM 059-2D	304 L		PV 111/1	4140		IARM 30H
1078		ECRM 056-2D	304 L		TL 2003D	4140		IARM 30J
1078		SRM 1224	304 L		SS 463/1	4140		IARM Fe4140-19
1080	17034	BS 54J	305		ECRM 297-1D	4140 Bi		BS 4140A
1090		SS 602/2	306		13X 30600A	4140 Bi		BS 4140B
1095		BS 64C	308		DSZU C017	41L40MOD	17025	BS 70B
1095		SRM 1227	309		BS 82E	41L40MOD	17034	BS 70C
1117	25(preceeded 17025)	BS 3993	309	17034	BS 309	4150 Bi & S		BS 4150MOD
1117		BS 65C	309		IARM Fe309-18	4150 S	17034	BS 4150MOD-A
1117		IARM 29E	310		13X 31008	4150 S	17034	BS 42
11L17	17025	BS 75F	310		BS 83G	415		13X 41500A
11L17	17025	BS 75G	310	25(pre-17025)	BS 9841	415		IARM Fe415-21
1118		IARM 307A	310	25(pre-17025)	BS 9842	416		BS 90F
1118		IARM 307B	310		CZ SL-3A	416	17025	BS 416
1141		BS 66B	310		IARM 4E	416		CT 416
1141		BS 1141	310		IARM 4F	416		IARM Fe416-22
1141		IARM 348A	310		IARM 4G	416		SRM 1223
1144	17025	BS 1144A	310		SS 464/1	416 H		13X 41600
1144		IARM 199C	3115		BS XCCT	416 Se		BS 151
1144		IARM Fe1144-22				418		IARM Fe418-18
1215		BS 66K				41CAD7		IRSID 1749
1215	17025	BS 66L				41L40	17025	BS 70B
1215		IARM Fe1215-18				41L50	17025	BS 72B
12L14		BS 74B				42		CT ISO138A
12L14	17025	BS 74C				42		CT ISO139A
12L14	17034	BS 74D				42CrMo4		PV 101/1
12L14		IARM Fe12L14-21				420	17034	BS 98
12Mn18Cr		BS 193				420		BS 420
1345		BS XCCV				420		BS SS4951
13-8PH		13X PH13800				420		BS SS4952
13-8PH		BS 184A				420		ECRM 272-1D
13-8PH		IARM 21D				420		IARM 154C
1429		ECRM 058-2D				420		SS 469
1513		IMZ 76				420		BS 152
1526 MOD		SRM 1269				420 F		IARM 352A
1541		IARM 349A				420 F S		13X 42200
1541		IPT 504				422		BS 97
1541		IRSID 1648				422	17025	BS 422
1544		IRSID 1644				422	17034	BS 422A
15-5PH		BS 185A				422		IARM Fe422-22
15-5PH		BS 9621				430		BS 91E
15-5PH		BS 9622				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	ALLOY	ISO?	NUMBER	ALLOY	ISO?	NUMBER
430		IARM 11D	A-36		BS 1018	HY 80		SRM 1286
430 F		BS 153	A-36		BS 1020	Hy-Tuff		IARM 342A
430 F		BS 154	A-36		BS LF2B	Invar		14X 93603
430 F S		IARM 355A	A-36		IARM 213C	Invar-36	17034	BS 186B
431	17025	BS 431	A-36		IARM 213D	Invar-36 + Se		BS 186A
431	17034	BS 431A	A-485-1		BS A485-1	Invar-36 + Se		IARM 24B
4130	17025	BS 4130	A-6		BS 40B	Invar 36 + Se		IARM FeINVR36-22
4130	17034	BS 4130A	A-6		IARM 40B	Invar 42		14X 94100
431		BS 92B	A-6		IARM 40C	ISO 898-1		SS 457/2
431		IARM 12C	A615-75		IARM 378A	Kovar	17025	BS 160A
431		HRT FE2010-H	A706-60		IARM 380A	Kovar	17034	BS 160B
431		SRM 1219	A706-60		IARM 380B	Kovar		IARM 98B
4320		BS 3961	A706-80		IARM 381A	Kovar		IARM FeKovar-18
4320	17034	BS 4320	Aermet 100		CT ISO045A	L-6	17025	BS 39B
4330 MOD	17034	BS 4330MOD	Aermet 100		IARM 242A	L-6		IARM FeL6-18
4330 MOD		IARM 330B	Aermet 100		IARM FeA100-18	LDX2101		13X 32101
4340	17025	BS 4340	AL6XN	17025	BS 189A	LF-2	17025	BS LF2C
4340	17034	BS 4340B	AL6XN		IARM 157D	LF-2		SS 601/2
4340		IARM 31G	C-5Mo	17034	BS 3952	LF-3		BS LF3
4340		IARM Fe4340-22	C-5Mo		IARM 229B	LF-3		BS LF3A
440 C		13X 44004	C-250		IARM 308A	M-1		BS TMI
440 C		BS 93E	C-350		IARM 309A	M-1		CT M1
440 C	17025	BS 93F	CA6NM		HRT FE2009-H	M-1		IARM 304A
440 C		IARM 13D	CA6NM		IARM 327A	M-1		IARM FeM1-18
440 F		BS 155	CD3MN		ECRM 298-2D	M-10		CT M10
440 F Se		BS 156	CD4MCU	17034	BS CD4MCU	M-10		IARM 324A
440 F Se		IARM 353A	CD4MCU	17034	BS CD4MCU-A	M-152		13X 64152
446		BS 94C	CD6MN		VS LG58	M-152		IARM 291A
450		BS 95A	CF-3		IRSID 1820	M-2		BS 32D
450	17034	BS 450	CF3M		ECRM 284-3D	M-2		CT M2
450	25 (pre-17025)	BS 9811	CLA6		IARM 169B	M-2		IARM 44C
450	25 (pre-17025)	BS 9812	CLA7		IARM 170B	M-2		IARM FeM2-18
450		IARM 15C	CLA11		IARM 180A	M-2		SRM 1157
450		CT 450	CLA5		IARM 168A	M-35		IARM 320A
455		13X 45500	CLA9		IARM 172A	M-4		IARM 251A
455		BS 96A	CPM15V	17025	BS PM15	M-4		IARM FeM4-18
455		BS SS1962	CPM15V		BS PM15A	M-42		SS 487/1
455		CT 455	CPM15V		BS PM15B	M-47	17025	BS M-47
455		IARM 16C	CPM15V		IARM Fe15V-18	M-50	17025	BS M-50
455		IARM Fe455-22	D-2		BS 37E	M-50		IARM 306B
4615	17034	BS 3962	D-2		BS 37G	M-55		IARM FeM62-18
4620		BS 4620	D-2	17034	BS 37H	M-7		CT M7
4620	17034	BS 51F	D-2		CT D2	Maraging 250	17034	BS M250
4620		IARM 33D	D-2		IARM 41D	Maraging 250		CT 250
465		13X 46500	D-6	17025	BS D-6	Maraging 250		ECRM 285-2
465		IARM 354A	D-6	17034	BS D-6A	Maraging 250		IARM FeC250-21
465		CT ISO123A	D6-AC		IARM 299A	Maraging 300	25 (pre17025)	BS 161A
4820	17025	BS 4820A	D6-AC		IARM FeD6AC-22	Maraging 300	17034	BS 161B
4820	17034	BS 4820B	DP1080		IARM FeDP1080-18	Maraging 300		CT 300
4820		IARM 155F	Duplex		13X NSA9	Maraging 300		IARM 99D
4820		IARM Fe4820-18	Duplex	17034	BS 2205A	NIT 135M		IARM 305B
5140H		IARM Fe5140H-18	Duplex		IMZ 164	Nitriding 135G		BS 68B
5160		IMZ 116	Duplex		TL 2001	Nitriding 135G	17025	BS 68E
6150	17034	BS 43A	E52100	17034	BS E52100	Nitronic 40		13X NSC6
6150		BS 4941	E52100		IARM 49E	Nitronic 40		BS 190
6150		IARM 34C	E52100 Bi		BS 53MOD	Nitronic 40		IARM FeN40-18
6150		IARM Fe6150-22	Elect. / Magnetic		SRM 1159	Nitronic 50		BS 180A
630		CT 630	Electrolytic		SRM 1265a	Nitronic 50	17034	BS 180B
6418	17034	BS 6418	ER321		13X 32180A	Nitronic 50		IARM 17D
6418		BS 69B	F-1		IARM FeF1-21	Nitronic 50		IARM FeN50-18
6526		BS 9-4-30	F-1		RM Fe 2	Nitronic 60	17025	BS 181B
709		CT X67975	F-11		BS 45A	NMS 100		IARM 214A
8620		12X 86200-21	F-11	17034	BS 45B	NMS 140		IARM 295A
8620		BS 1931	F-11	17034	BS 45C	O-1	17025	BS 35D
8620 + Bi		BS 8620A	F-11		IARM 35L	O-1		CT O1
8620	17034	BS 8620G	F-11		IARM FeF11-21	O-2		CZ LA-4C
8620		IARM Fe8620-18	F-2		CT X27081	O-6	17025	BS 41
8620		IPT 502	F-22	17034	BS 46B	O-6	25 (preceeded 17025)	BS 41A
86L20	25 (preceeded 17025)	BS 73B	F-22	25 (preceeded 17025)	BS 1982	O-6		IARM 45A
86L20	17034	BS 73C	F-22		IARM 36C	O-6		IARM 45B
86L20	17034	BS 73D	F-22		SRM 1270	P-20 MOD	17034	BS 55H
8630	17034	BS 8630	F-22		SRM 1270A	P-20 + Al		BS 68C
8740		BS 67B	F-22 + Cr		HRT FE2009-N	RA330		BS 86F
8740	17034	BS 8740	F-5		BS 47A	Railroad Steel	17034	BS 54H
8740		IARM 252C	F-5		BS 47B	Railroad Steel	17034	BS 54J
8740		IARM 252D	F-5		IARM 37C	s-1		BS 33D
8740		IARM 252E	F-51	17034	BS 2205A	s-1		BS 33E
8740		IARM 252F	F-9	17034	BS 48B	s-1		IARM 46B
8822		BS 8822	F-9		IARM FeF9-18	s-1 MOD	17034	BS 33F
8822	17034	BS 8822A	F-91		13X 90901	s-5		BS 38C
904L		ECRM 295-1D	F-91	17025	BS 9905A	s-5		BS TS-5
9310		IARM Fe904L-22	F-91		HRT FE2003-H	s-5		IARM 47B
9310		BS 58C	F-91		IARM Fe91-18	s-7		BS TS7
9310		BS 58D	Ferrallium 255		BS 179A	s-7	17034	BS TS-7A
9310		BS 58E	Ferallium 255	17025	BS 179B	s-7		IARM 259A
9310	17034	BS 9310	Ferallium 255	17025	BS 179C	s-7		IARM FeS7-18
9310		IARM Fe9310-18	F6NM 25 (preceeded 17025)		BS 0022	s-7		SRM 1772
9325	17034	BS 9325A	Greek Ascology		BS 183A	S42027		13X 42027A
9325	17034	BS 9325B	Greek Ascology	17034	BS 183B	SA213-T22		IMZ 159
9-4-30		IARM 341A	Greek Ascology	17034	BS 183C	SA213-T22		IMZ 160
A-10		BS A-10	Greek Ascology		IARM 20C	SA213-T22		IMZ 169
A-11		BS 10V	H-10		BS 49	SAE G2500		BS 20E
A-11	17025	BS A-11	H-11		BS TH11	T-1	17025	BS 30D
A-106 Gr B		SRM 1228	H-11		ECRM 276-2D	T-1		IARM FeT1-18
A-193 B16		BS 4942	H-11		IARM 255A	T-4		IARM 281A
A-193 B16	17025	BS 4942A	H-11		IARM 255B	T-15	17034	BS TS15
A-2		BS 36C	H-11		IMZ 173	T23		IARM FeT23-18
A-2		BS 36D	H-12		BS TH12	VM12		IMZ 196
A-2		BS 36E	H-13		BS 34D	W-5		14X 72305
A-2		CT A2	H-13	17034	BS H-13A	Z30C13		IRSID 1825
A-2		IARM 39B	H-13		CT H13	Zeron 100, Duplex		13X NSA8
A-2		IARM 39C	H-13		IARM 42C	Zeron 100, Duplex		IARM FeZ100-18
A-242		IPT 500A	H-13		IMZ 174			
A-286	17025	BS 188B	H-19	17025	BS H-19			
A-286		IARM 26D	HC 250+v		SRM C1290			
A-286		SRM 1230	High Perm		CT ISO124A			
A-36		BS 1016	High Perm		CT ISO136A			
A-36		BS 1016	High Perm 49		CT ISO141A			
			HSLA 100		SRM 1271			
			HY 130		SRM 1226			

**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
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**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
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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	0.30-0.60	<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	0.50-0.75	.	
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

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## 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	.	

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