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There is now an
Alloy Specification
Guide on the
last pages.

CRM NICKEL SET

available in SET/5 only rods 6 mm Ø x 100 mm

Number	Co	Cu	Fe	Mg	Mn	Ni	Si
IMN 6-1	0.045	0.21	0.096	0.22	0.0063	Rem	0.0043
IMN 6-2	0.091	0.26	0.33	0.0061	0.18	Rem	0.0074
IMN 6-3	0.19	0.044	0.050	0.012	0.015	Rem	0.18
IMN 6-4	0.40	0.10	0.023	0.075	0.074	Rem	0.06
IMN 6-5	0.71	0.0094	0.011	0.0014	0.0018	Rem	0.0012

CRM NICKEL

wrought analysis listed in mass % except * which is mg/kg BS 200A: 38 mm Ø x 12 mm others: 38 mm Ø x 15 mm

Number	Al	As	B	Bi*	C	Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	N	Nb	Ni
BS 200-1	0.0048	0.0010	0.0033	.	0.0413	0.0024	0.089	0.0011	0.0077	0.046	0.0307	0.111	0.0004	(0.0002)	0.0004	99.60
BS 200A	0.0281	0.0015	0.0044	.	0.078	0.0003	0.0564	0.0006	0.0038	0.074	0.0131	0.151	0.0004	0.0004	0.0004	99.54
BS 200-3	0.0068	0.0015	0.0037	(0.2)	0.0145	0.0003	0.103	0.0091	0.108	0.138	0.0240	0.157	0.0004	(0.0002)	0.0004	99.4
BS 200-2	0.0041	0.0012	0.0031	.	0.050	0.0004	0.104	0.0094	0.053	0.115	0.0368	0.244	0.0005	0.0003	0.0009	99.31
BS 200-4	0.0057	0.0014	0.0037	.	0.107	0.00028	0.0911	0.132	0.0482	0.297	0.0312	0.310	0.0013	0.00031	0.0010	98.9

Number	O	P	Pb	S	Sb*	Si	Sn	Ta	Te*	Ti	V	W	Zn*	Zr
BS 200-1	0.0015	0.0009	0.0010	0.0011	(0.2)	0.037	(0.0001)	(0.0004)	.	0.0209	0.0008	0.00016	.	(0.0002)
BS 200A	0.0013	0.0007	(0.00005)	0.0037	(0.2)	0.0051	(0.0001)	(0.0003)	.	0.0427	0.0006	0.0005	.	(0.0004)
BS 200-3	0.0026	0.0015	0.0008	0.0032	(0.4)	0.0110	0.0003	(0.0001)	(0.4)	0.0235	0.0009	(0.0004)	(2)	(0.0003)
BS 200-2	0.0025	0.0020	0.0006	0.0068	(0.4)	0.060	(0.0002)	(0.0002)	.	0.0197	0.0014	(0.0003)	.	(0.0003)
BS 200-4	0.0015	0.0023	0.00087	0.0076	0.4	0.101	0.0020	0.0003	.	0.0191	0.0024	0.00095	.	(0.0004)

NICKEL

= class, where 1 = CRM and 2 = RM

31 mm Ø x 2 or 18 mm

#	Number	Ag	Al	As	Bi	C	Cd	Co	Cr	Cu	Fe	Mn	N	Ni	O
2	IARM 190A	0.00109	0.0050	0.0028	0.00111	0.0022	0.0005	0.0008	(0.0001)	0.0017	0.0099	0.00018	trace	Rem	.
2	IARM 189A	0.00024	0.0044	0.00007	0.00026	0.0023	0.00008	0.00031	(0.0010)	0.00090	0.0038	0.00019	trace	Rem	.
2	IARM 188A	0.00011	0.0024	0.00007	0.00009	0.0022	0.00002	0.00017	(0.0006)	0.00018	0.0019	0.00023	trace	Rem	.
2	IARM 191A	0.00001	0.00015	0.0013	<0.00001	0.0014	<0.0001	0.0545	0.00021	0.00042	0.00079	0.00031	trace	Rem	.
2	IARM 187A	0.00001	0.0011	0.00001	<0.00001	0.0013	(<0.00001)	0.00010	(0.0003)	0.00022	0.0019	0.00030	trace	Rem	.
1	IARM 50B	.	0.031	.	.	0.010	.	0.069	0.010	(0.001)	0.079	0.20	0.0001	99.5	0.0061

Number	P	Pb	S	Sb	Se	Si	Sn	Te	Ti	Tl	V	W	Zn	Zr
IARM 190A	0.0034	0.00093	0.00033	0.0011	0.00065	0.0028	0.00062	0.00089	(0.0006)	0.00058	.	.	0.00081	.
IARM 189A	0.00037	0.00029	0.00018	0.00039	0.00021	0.0019	0.00022	0.00017	(0.0003)	0.00023	.	.	0.00028	.
IARM 188A	0.00014	0.00010	0.00018	0.00011	0.00007	0.0018	0.00011	0.00008	(0.0002)	(0.00009)	.	.	0.00023	.
IARM 191A	<0.00010	0.00003	0.00021	<0.00005	0.00019	(0.0005)	0.00004	<0.00001	(<0.0001)	<0.00002	.	.	0.00019	.
IARM 187A	<0.00010	0.000015	0.00019	<0.00005	<0.00001	(0.0018)	0.00004	<0.00001	(0.0003)	<0.00002	.	.	<0.00005	.
IARM 50B	0.002	.	0.0002	.	.	0.059	<0.001	.	0.002	.	0.016	0.010	.	(0.001)

RM NICKEL

cast typical analysis 40 mm Ø x 15 mm

Number	Al	Co	Cr	Cu	Fe	Mg	Mn	Si	Ti
21X 17519	0.19	0.77	0.06	0.06	0.28	0.20	0.35	0.17	0.07
21X 17520	0.04	0.48	0.10	0.09	0.25	0.06	0.18	0.20	0.08
21X 17521	0.03	0.26	0.16	0.16	0.24	0.03	0.11	0.28	0.12
21X 17522	0.026	0.04	0.23	0.20	0.07	<0.005	0.02	0.35	0.31

Co/Cr NICKEL ALLOY TYPE IN 100

= class, where 1 = CRM and 2 = RM wrought analysis listed in mass %

#	Number	Co	Cr	Al	Mo	Ti	V	B	C	Cu	Fe	Mn	Si	Zr	Units
1	SS 346A	(15)	(10)	(5.5)	(3)	(5)	(1)	.	(0.15)	.	.	.	.	.	38 mm Ø x 13 mm
1	SS 345	14.70	9.93	5.58	3.01	(5)	1.00	0.019	0.153	.	.	.	.	0.044	35 mm Ø x 13 mm

continued analysis listed in mg/kg

Number	Ag	As	Bi	Ca	Cd	Ga	In	Mg	Pb	Sb	Se	Sn	Te	Tl	Zn
SS 346A	42	51	10	(20)	0.4	(50)	(20)	130	22	45	6	93	9	(2)	29
SS 345	<0.2	(2)	<0.2	(<5)	<0.1	8	.	5	0.2	<2	<0.5	6	<0.2	<0.2	<0.5

Al/B/Co/Cr NICKEL ALLOY

= class, where 1 = CRM and 2 = RM cast analysis listed in mass %

~40 mm Ø x ~15 mm

#	Number	Co	Cr	Al	Fe	Mo	Ta	Ti	B	C	Cu	Mn	Nb	P	S	Si	W	Zr	Ni
2	219X 1837	10.05	9.95	5.35	0.09	3.02	.	5.22	0.02	<0.01	.	<0.02	<0.02	<0.01	<0.005	<0.02	0.11	0.03	.
1	219X 1867	9.80	7.78	6.05	0.244	6.00	4.05	1.355	0.0152	0.092	0.308	0.131	0.052	0.0054	0.0055	0.187	0.066	0.273	63.81

CRM CHROMIUM NICKEL ALLOY

~40 mm Ø x ~15 mm

Number	C	Co	Cr	Cu	Fe	Mn	Mo	N	Nb	Ni	P	S	Si
219X 20500	0.0486	0.016	49.99	0.0103	3.65	0.710	0.082	0.175	0.214	43.88	0.0026	0.0100	1.24

Co/Cr and Cr/Co NICKEL ALLOYS

= class, where 1 = CRM and 2 = RM

* Provisional Analysis

#	Number	Cr	Co	Al	Fe	Mo	Ta	Ti	W	C	Cu	Mn	P	S	Si	V
1	IMZ 186	23.14	Rem	0.28	0.10	.	3.78	0.19	7.17	0.59	.	.	.	.	.	.
2	BS 617	22.44	12.42	1.20	1.76	9.64	.	0.28	0.06	0.079	0.062	0.057	0.007	<0.001	0.14	0.022
1	IARM 100C	21.9	17.9	0.35	31.2	3.06	0.67	0.013	2.49	0.104	0.105	0.97	0.013	0.0005	0.441	0.039
2	27X 14184	21.8	10.5	0.02	0.40	10.7	.	0.02	.	.	0.09	0.40	.	.	0.41	.
2	27X 14188	21.17	10.4	<0.01	0.44	10.3	.	0.03	.	.	(0.003)	0.30	.	.	0.33	.
2	24X 14939	21.0	19.58	0.76	0.57	6.62	.	1.88	.	.	0.52	0.63	.	.	0.42	.
1	SRM 1775	20.472	33.352	(0.024)	0.91	9.508	.	0.730	(0.02)	(0.0051)	(0.0046)	0.0121	(0.0006)	0.0013	(0.02)	0.0095
2	24X 11005	20.21	18.74	0.41	0.81	5.93	.	2.45	.	.	0.72	0.65	.	.	0.39	.
2	27X 14387	20.2	10.0	<0.005	1.11	10.8	.	<0.005	.	.	<0.005	0.27	.	.	0.28	.
2	22X 904	19.9	16.9	1.29	0.25	0.21	.	2.26	.	0.08	0.10	0.50	.	.	0.52	.
2	22X 905	19.89	16.45	1.03	1.15	0.53	.	2.92	.	0.19	0.23	1.08	.	.	0.22	.
2	22X 903	19.84	17.60	1.67	0.83	0.07	.	1.86	.	0.08	0.01	0.25	.	.	1.09	.
2	BS 263	19.84	19.92	0.38	0.47	5.70	.	2.21	0.24	0.071	0.024	0.36	0.005	<0.002	0.28	0.004
1	24X WASP3	19.76	13.77	1.54	1.197	3.98	.	3.904	(0.111)	0.102	0.470	0.650	0.018	0.0171	0.403	0.082
1	IARM 62E *	19.56	13.22	1.36	0.89	4.27	(0.005)	3.07	0.03	0.035	0.012	0.02	0.004	(0.0003)	0.05	0.034
1	24X 07001	19.55	13.05	1.40	1.007	4.25	.	3.05	.	0.040	0.0138	0.0269	0.0030	(0.0006)	0.090	.
1	SS 310/1	19.45	17.0	1.06	0.25	.	.	2.43	.	0.068	.	0.35	.	.	0.46	.
2	BS 199A	19.25	13.47	1.26	1.05	3.99	.	3.07	.	0.033	0.022	0.014	0.006	<0.001	0.05	0.020
1	SRM 1243	19.20	12.46	1.23	0.79	4.25	.	3.06	.	0.024	0.007	0.019	0.003	0.0018	0.018	0.12
2	22X 902	18.80	17.08	1.31	0.61	0.22	.	2.26	.	0.15	0.13	0.51	.	.	0.50	.
1	IARM 325A *	18.53	10.47	1.56	0.07	9.99	(0.003)	3.16	(0.03)	0.067	0.004	(0.004)	(0.003)	0.0003	0.012	0.01
2	24X WASP2	18.5	14.6	1.00	1.66	4.22	.	3.53	0.14	0.09	0.11	0.24	0.009	0.018	0.35	0.06
2	24X WASP1	16.64	12.8	1.64	2.16	6.14	.	3.13	0.18	0.01	0.08	0.13	0.019	0.011	0.59	0.03
1	24X 7201	16.01	14.79	2.44	0.09	3.01	.	5.10	1.32	0.0322	.	0.0022	(0.0024)	0.0024	0.036	.
1	22X 1051	15.95	18.98	4.35	0.575	4.50	.	1.078	.	0.166	0.115	0.206	.	0.0015	0.58	.
1	IMZ 183	15.87	8.32	3.51	(0.046)	1.81	1.87	3.34	2.66	0.100	.	.	.	.	.	.
2	22X 1052	15.7	18.6	4.08	0.65	4.48	.	1.09	.	0.19	0.13	0.26	.	.	0.51	.
1	22X 1055	14.9	19.9	3.97	1.26	3.87	.	0.52	.	0.274	0.02	0.03	.	0.009	0.24	.
1	IARM 277A	14.35	14.5	4.38	0.16	4.22	(0.02)	3.40	0.047	0.080	0.004	0.01	0.002	0.0010	0.037	0.011
1	IMZ 184	14.16	14.32	4.37	.	4.30	.	3.43	.	0.086	.	.	(0.001)	.	(0.018)	.
2	210X 11981	11.81	14.65	5.07	0.93	3.66	.	4.83	.	0.09	0.10	0.21	.	.	0.33	0.73
1	210X 11775	10.42	14.83	7.0	1.02	3.19	.	5.76	.	0.024	(0.008)	0.127	.	.	0.36	0.47
1	IMZ 185	9.91	4.47	5.56	(0.022)	3.92	.	2.73	5.12	0.152	.	.	.	.	.	.
1	IMZ 182	8.63	13.52	5.69	(0.04)	3.10	.	4.69	.	0.169	.	.	.	.	.	0.81
1	IMZ 181	8.36	10.02	5.61	0.071	0.67	3.20	1.04	9.97	0.150	.	.	.	.	.	.
1	IARM 283A *	8.1	9.8	6.0	0.043	5.93	4.3	0.98	0.05	0.11	(0.01)	(0.002)	(0.003)	0.0006	(0.02)	(0.01)
2	210X 11979	8.07	14.32	3.76	0.56	3.28	.	5.22	.	0.025	0.07	0.13	.	.	0.30	0.82
1	IMZ 180	7.98	9.95	6.00	0.073	5.96	4.26	1.02	(0.048)	0.107	.	.	(0.003)	.	(0.026)	.

note: IMZ samples are 1/4 sections of large cylinders

Number	Ag	As	B	Hf	Mg	N	Nb	Ni	O	Pb	Sn	Zr	Units
IMZ 186	.	.	(0.007)	.	.	.	.	10.22	.	.	.	0.40	1/4 of 78 mm Ø x 30 mm
BS 617	.	.	0.0020	.	(0.02)	0.0070	0.123	(51.6)	.	0.0001	.	.	50 mm Ø x 12 mm
IARM 100C	.	.	(0.002)	.	(0.001)	0.126	0.172	20.5	0.001	.	0.003	0.006	31 mm Ø x 2 or 18 mm
27X 14184	40 mm Ø x 15 mm
27X 14188	40 mm Ø x 15 mm
24X 14939	40 mm Ø x 15 mm
SRM 1775	.	.	0.0097	.	.	(0.002)	(0.03)	34.911	.	.	.	.	35 mm Ø x 12 mm
24X 11005	40 mm Ø x 15 mm last of stock
27X 14387	40 mm Ø x 15 mm
22X 904	0.005	.	.	.	.	.	.	.	40 mm Ø x 15 mm
22X 905	40 mm Ø x 15 mm
22X 903	0.002	.	.	.	.	.	.	.	40 mm Ø x 15 mm
BS 263	.	.	(0.001)	.	.	.	0.04	(50.65)	.	.	.	(0.002)	50 mm Ø x 12 mm
24X WASP3	.	.	0.0102	.	.	.	0.149	53.51	.	.	.	0.146	~40 mm Ø x ~15 mm
IARM 62E *	.	.	0.0069	.	0.0018	0.0030	0.037	57.3	(0.0004)	.	0.0010	0.060	31 mm Ø x 2 or 18 mm
24X 07001	.	.	0.0075	.	.	.	0.0500	57.45	.	.	.	0.0591	~32 mm Ø x ~20 mm
SS 310/1	58.6	.	.	.	.	38-50 Ø mm x 13-19 mm
BS 199A	.	.	(0.004)	.	.	.	0.040	57.8	.	.	.	(0.04)	40 mm Ø x 12 mm
SRM 1243	.	.	0.005	.	.	.	.	58.78	.	.	.	0.053	34 mm Ø x 19 mm
22X 902	0.02	.	.	.	.	.	.	.	40 mm Ø x 15 mm
IARM 325A *	.	.	0.0082	.	0.0045	0.0017	(0.006)	56.1	0.0005	.	(0.0002)	(0.002)	31 mm Ø x 2 or 18 mm
24X WASP2	.	.	0.008	.	.	.	0.12	.	.	.	.	0.07	40 mm Ø x 15 mm
24X WASP1	.	.	0.007	.	.	.	0.055	.	.	.	.	0.12	40 mm Ø x 15 mm
24X 7201	.	.	0.0242	.	.	0.005	.	57.10	.	.	.	0.0433	40 mm Ø x 13 mm
22X 1051	.	.	0.0009	.	0.0186	.	.	.	.	.	.	.	40 mm Ø x 15 mm
IMZ 183	.	.	(0.010)	.	.	.	0.92	.	.	.	.	0.030	1/4 of 70 mm Ø x 40 mm
22X 1052	0.002	.	.	.	.	.	.	.	40 mm Ø x 15 mm
22X 1055	(0.008)	.	.	.	.	.	.	.	40 mm Ø x 15 mm
IARM 277A	.	.	0.015	.	0.0021	0.0017	0.034	58.9	0.0005	.	<0.003	0.010	31 mm Ø x 2 or 18 mm
IMZ 184	.	.	0.016	.	.	.	(0.032)	.	.	.	.	(0.012)	1/4 of 80 mm Ø x 30 mm
210X 11981	0.11	40 mm Ø x 15 mm
210X 11775	(0.003)	.	.	.	.	.	0.070	45 mm Ø x 20 mm
IMZ 185	.	.	0.015	.	(0.002)	.	.	.	.	.	.	(0.014)	1/4 of 64 mm Ø x 45 mm
IMZ 182	.	.	0.013	.	.	.	.	.	.	.	.	0.031	1/4 of 64 mm Ø x 45 mm
IMZ 181	.	.	(0.015)	1.46	.	.	0.023	.	.	.	.	(0.032)	1/4 of 96 mm Ø x 20 mm
IARM 283A *	.	.	0.014	.	(0.003)	0.0004	0.020	64.4	0.0005	.	(0.0002)	0.053	31 mm Ø x 2 or 18 mm
210X 11979	0.04	40 mm Ø x 15 mm
IMZ 180	.	.	(0.017)	.	.	.	0.024	.	.	.	.	0.075	1/4 of 80 mm Ø x 30 mm

Cr/Fe TYPE 'RA 333' NICKEL ALLOYS

BS: 38 mm Ø x 12 mm IARM: 31 mm Ø x 2 or 18 mm

Number	Cr	Fe	Al	Co	Cu	Mn	Mo	Nb	Si	W	Ni
CRM											
IARM 60B	25.3	17.9	0.05	2.9	0.05	1.53	2.87	0.016	0.87	3.08	45.3
RM wrought											
BS 197B	25.73	16.24	0.11	3.22	0.030	1.58	3.27	(0.02)	0.92	2.91	45.6
BS 197A	25.11	18.07	0.18	3.06	0.12	1.56	2.99	0.20	0.96	2.79	44.44

Number	B	C	Mg	N	O	P	Pb	S	Sn	Ta	Ti	V	Zr
IARM 60B	0.002	0.062	(0.001)	0.029	0.0035	0.015	.	0.0003	0.002	(0.01)	0.004	0.070	0.001
BS 197B	0.0018	0.049	0.013	(0.049)	.	0.011	.	0.0008	(0.002)	.	0.091	0.053	.
BS 197A	0.0019	0.050	.	(0.052)	.	0.021	(0.0002)	<0.001	.	.	0.017	0.051	.

Cr/Fe NICKEL ALLOY TYPE 600 and 690

= class, where 1 = CRM and 2= RM

#	Number	Cr	Fe	Al	B	C	Co	Cu	Mg	Mn	Mo	N	Nb	Ni	Si	Ti	V
2	IARM 201A	29.9	9.09	0.37	.	0.019	0.009	0.008	0.006	0.19	0.018	0.0053	0.009	59.9	0.15	0.30	0.011
2	28X 6005	16.93	6.98	0.06	.	.	0.62	0.39	0.002	0.39	.	.	.	.	0.60	0.28	.
2	28X 6001	16.38	6.33	0.02	.	.	1.02	0.83	0.01	0.12	.	.	.	.	0.95	0.58	.
2	BS 600-2	16.36	6.80	0.16	0.0098	0.071	0.10	0.089	0.012	0.31	0.007	0.030	(0.02)	75.34	0.23	0.37	0.028
2	28X 6002	16.23	8.24	0.18	.	.	0.22	0.02	0.004	0.65	.	.	.	.	0.25	0.12	.
2	28X 6004	16.21	7.17	0.05	.	.	0.77	0.42	0.008	0.38	.	.	.	.	0.65	0.27	.
1	SRM 1244	15.7	9.6	0.26	<0.005	0.062	0.058	0.26	.	0.29	0.20	.	.	73.2	0.12	0.25	.
2	BS 600C	15.64	9.30	0.20	0.0012	0.072	0.04	0.040	0.0056	0.50	0.027	0.0074	(0.014)	73.59	0.39	0.21	0.022
2	BS 600-5	15.59	8.36	0.19	0.0018	0.047	0.029	0.10	0.004	0.21	0.049	0.011	(0.03)	74.83	0.26	0.23	0.054
2	28X 6003	15.56	7.1	0.025	.	.	0.62	0.42	0.01	0.47	.	.	.	.	0.74	0.22	.
1	IARM 53E	15.39	9.42	0.25	0.0026	0.072	0.045	0.168	0.045	0.21	0.220	0.0055	0.024	73.7	0.050	0.254	0.013
2	BS 600-1	15.35	8.82	0.26	0.0089	0.070	0.10	0.14	0.023	0.39	0.009	0.015	(0.02)	74.3	0.105	0.32	0.028
1	IARM 53D	15.20	6.86	0.34	0.0035	0.045	0.052	0.015	0.007	0.49	0.02	0.0075	0.006	76.2	0.35	0.34	0.022
2	BS 600-6	14.86	7.33	0.288	0.0028	0.083	0.066	0.24	0.022	0.21	0.12	0.0078	0.14	76.0	0.31	0.24	0.023
2	BS 600-3	14.77	8.88	0.09	0.0082	0.020	0.10	0.24	0.012	0.28	0.007	0.0081	(0.02)	75.05	0.19	0.20	0.020
2	BS 600-4	14.72	8.40	0.06	0.0060	0.034	0.09	0.08	0.020	0.20	(0.002)	0.021	(0.015)	75.88	0.22	0.20	0.023

Number	As	O	P	Pb	S	Sb	Sn	W	Units
IARM 201A	.	.	0.005	.	(0.0004)	.	.	.	31 mm Ø x 2 or 18 mm
28X 6005	40 mm Ø x 15 mm
28X 6001	40 mm Ø x 15 mm
BS 600-2	.	.	0.006	.	0.004	.	.	.	38 mm Ø x 12 mm
28X 6002	40 mm Ø x 15 mm
28X 6004	40 mm Ø x 15 mm
SRM 1244	.	.	0.010	.	0.003	.	.	.	35 mm Ø x 19 mm
BS 600C	.	.	0.008	.	<0.002	.	.	(0.003)	38 mm Ø x 12 mm
BS 600-5	.	0.002	0.005	.	<0.002	.	.	.	38 mm Ø x 12 mm
28X 6003	40 mm Ø x 15 mm
IARM 53E	(0.001)	0.0003	0.007	(0.0001)	0.0011	(0.0002)	<0.005	0.024	31 mm Ø x 2 or 18 mm
BS 600-1	.	.	0.007	.	0.004	.	.	(0.003)	40 mm Ø x 6 mm
IARM 53D	.	0.0009	0.005	.	0.0005	.	.	<0.005	31 mm Ø x 2 or 18 mm last of stock
BS 600-6	.	.	0.007	.	0.001	.	.	.	38 mm Ø x 12 mm
BS 600-3	.	.	0.008	.	0.005	.	.	.	38 mm Ø x 12 mm
BS 600-4	.	.	0.007	.	0.004	.	.	.	38 mm Ø x 12 mm

Cr/Fe NICKEL ALLOY TYPE 718

= class, where 1 = CRM and 2 = RM

#	Number	Cr	Fe	Nb	Mo	Ti	Al	B	C	Co	Cu	Mn	P	S	Si	Ni
1	28X 7185	20.77	18.44	4.61	2.71	0.281	0.359	0.0107	0.060	0.220	0.203	0.286	0.0189	0.0089	0.882	50.67
1	28X 7182	19.98	(14.7)	4.74	3.59	0.98	0.41	0.0047	0.021	0.632	0.134	0.310	0.007	0.0106	0.390	53.86
2	28X 7181	18.71	(19.5)	4.97	2.94	0.025	(0.007)	0.0010	0.008	0.01	0.013	0.108	(0.003)	0.005	0.71	52.6
1	28X 07718	18.62	19.55	5.05	3.01	0.945	0.544	0.0034	0.026	0.172	0.038	0.055	0.0063	0.0015	0.076	51.99
1	SRM 1249	18.472	17.693	5.196	3.112	0.959	0.5682	(0.0023)	(0.0380)	0.3371	0.1402	(0.108)	(0.0134)	(0.00064)	(0.120)	53.29
1	28X 7183	18.4	17.2	5.57	3.49	1.23	0.90	0.0120	0.119	(0.91)	0.319	0.41	0.015	0.0097	0.309	51.0
1	SS 351	18.12	18.26	5.20	3.06	1.06	0.55	0.0051	0.025	0.136	0.016	0.037	(0.006)	0.0006	0.14	53.1
2	BS 718B	17.60	19.64	5.29	2.93	0.95	0.57	0.0042	0.036	0.19	0.044	0.125	(0.006)	0.001	0.12	52.1
1	28X 7184	16.91	18.22	5.07	3.07	0.633	0.620	0.0052	0.085	0.44	0.123	0.215	0.0103	0.0158	0.403	54.16
1	28X 7186	16.13	16.51	5.75	3.24	1.04	0.70	0.0097	0.043	0.579	0.190	0.398	0.020	0.0264	0.358	55.06

Number	Mg	N	Pb	Sn	Ta	V	W	Zr	Units
28X 7185	.	0.172	.	.	0.115	.	.	.	cast ~40 mm Ø x ~15 mm
28X 7182	.	.	.	0.005	.	0.145	0.030	.	cast 43 mm Ø x 20 mm
28X 7183	.	0.019	.	0.0056	0.022	0.134	0.076	.	cast 43 mm Ø x 20 mm
28X 07718	.	0.0056	.	.	.	.	.	.	wrought 38 mm Ø x ~15 mm.
28X 7181	.	0.233	.	0.003	.	0.02	.	.	cast 43 mm Ø x 20 mm
SRM 1249	(0.0012)	(0.007)	(0.00001)	(0.0024)	(0.0027)	(0.0338)	(0.0846)	(0.0029)	41 mm Ø x 19 mm
SS 351	wrought 41 mm Ø x 13 mm
BS 718B	wrought 38 mm Ø x 12 mm
28X 7184	.	0.084	.	.	0.077	.	.	.	cast ~40 mm Ø x ~15 mm
28X 7186	.	0.064	.	.	.	.	.	.	cast 40 mm Ø x 15 mm

Cr/Fe NICKEL ALLOY TYPE 750

= class, where 1 = CRM and 2 = RM

#	Number	Cr	Fe	Ti	Al	C	Co	Cu	Mn	Mo	Nb	Ni	P	S	Si	Ta
2	BS 750B	15.70	7.23	2.58	0.72	0.052	0.35	0.05	0.09	0.21	1.06	71.92	0.006	(<0.001)	0.14	(0.01)
2	HT 8211X	15.48	6.81	2.33	0.68	0.052	0.10	0.090	0.53	.	0.45	.	.	0.004	0.36	0.22
1	IARM 57D	15.42	7.31	2.51	0.60	0.051	0.040	0.015	0.048	0.01	0.869	73.0	0.0041	0.0005	0.16	(0.004)
2	HT 8209X	15.38	7.01	2.74	0.88	0.044	0.15	0.051	0.67	.	0.52	.	.	0.003	0.31	0.23
2	28X 7502	14.93	6.70	2.60	0.74	0.10	.	0.22	1.03	0.35	0.96	.	.	.	0.33	.
2	28X X7504	14.22	6.42	2.59	0.70	0.03	1.18	0.22	1.09	0.46	0.95	REM	.	.	0.39	.

Number	B	Mg	N	O	Sn	V	W	Zr	Units
BS 750B	0.003	.	.	.	.	0.04	.	.	37 mm Ø x 12 mm wrought
HT 8211X	.	.	.	.	.	.	.	.	25 mm Ø x 50 mm wrought
IARM 57D	0.003	0.0028	0.0022	0.0013	0.0012	0.024	0.01	0.037	31 mm Ø x 2 or 18 mm
HT 8209X	.	.	.	.	.	.	.	.	25 mm Ø x 50 mm wrought
28X 7502	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm cast
28X X7504	.	.	.	.	.	.	.	.	40 mm Ø x 15 mm cast

Cr/Mo NICKEL ALLOY AND TYPE 625

= class, where 1 = CRM and 2= RM

#	Number	Cr	Mo	Fe	Nb	Si	Ti	W	Al	B	C	Co	Cu	Mn	P	S	Ni
2	26X 11383	22.50	9.37	0.49	.	0.29	2.84	.	0.67	.	.	0.05	0.08	0.19	.	.	.
2	CT E	23.06	1.80	.	0.78	0.02	2.72	.	0.78	0.0070	0.026	0.10	0.10	0.25	0.014	0.012	54.68
1	28X 6254	22.71	8.92	3.33	3.60	(0.79)	0.179	.	(0.05)	0.005	0.047	0.195	0.044	0.457	0.0097	0.0160	59.95
1	28X 06625	21.94	9.15	0.917	3.52	0.273	0.238	.	0.184	0.0009	0.020	0.031	0.0288	0.090	(0.0022)	0.0037	63.49
1	IARM 54F *	21.86	8.86	3.78	3.43	0.176	0.28	0.059	0.23	0.0026	0.025	0.076	0.040	0.19	0.005	0.0003	61.1
1	ECRM 377-2	21.72	8.94	3.77	3.50	0.077	0.264	.	0.232	(0.0006)	0.0202	0.0348	0.0104	0.0225	0.0036	0.0006	61.45
1	ECRM 377-1	21.72	8.94	3.77	3.50	0.077	0.255	.	0.216	(0.0006)	0.0202	0.0348	0.0110	0.0225	0.0036	0.0006	61.45
1	BS 625A	21.71	9.23	3.06	3.60	0.080	0.287	0.066	0.215	0.0015	0.0241	0.066	0.073	0.068	0.0065	0.00049	61.3
1	BS 6253	21.66	7.69	5.23	4.202	1.13	0.360	.	(0.21)	.	0.126	0.417	0.299	0.677	0.013	0.0211	57.51
2	26X 14182	21.61	10.11	0.09	.	(0.01)	2.75	.	0.76	.	.	0.06	0.006	(<0.005)	.	.	.
2	CT D	21.50	2.14	.	1.23	0.22	2.12	.	1.15	0.0035	0.072	0.01	0.06	0.07	0.008	0.008	55.07
2	BS H-6A	21.37	13.37	4.34	(0.029)	(0.03)	0.006	3.09	0.24	0.0012	0.005	1.11	0.070	0.31	0.010	<0.002	(55.8)
1	28X 6256	21.29	8.81	(0.034)	3.75	0.041	0.266	.	0.301	.	0.0173	.	0.018	(0.0004)	0.0033	(0.0016)	65.4
2	BS 625B	21.28	9.58	4.51	3.53	0.12	0.20	0.06	0.33	(0.0021)	0.023	0.24	0.22	0.10	0.010	<0.003	(59.8)
2	26X 11385	21.20	9.25	0.25	.	0.43	3.40	.	0.93	.	.	0.07	0.07	0.58	.	.	.
1	28X 6252	21.08	9.23	3.72	3.96	0.559	0.21	.	0.257	0.0166	0.084	0.262	0.483	0.276	(0.008)	0.0138	59.37
2	BS 725	20.72	7.97	8.0	3.52	0.02	1.52	.	0.13	(0.002)	0.010	0.02	0.014	0.08	0.004	0.002	58.0
2	26X 11384	20.5	10.2	0.98	.	0.15	2.6	.	0.50	.	.	0.30	0.12	0.13	.	.	.
1	28X 6251	20.49	9.94	3.28	2.00	0.274	0.017	.	(0.054)	(0.0043)	0.028	(0.041)	0.072	0.139	0.0055	0.0043	63.36
2	26X 11381	19.76	9.47	0.70	.	0.30	2.48	.	0.41	.	.	(0.047)	0.008	0.43	.	.	.
1	28X 6255	19.41	8.05	1.88	4.11	0.591	0.413	.	0.35	.	0.035	0.239	0.686	0.230	0.008	0.016	63.6

#	Number	Cr	Mo	Fe	Nb	Si	Ti	W	Al	B	C	Co	Cu	Mn	P	S	Ni
	Number	As	Ca	Mg	N	O	Pb	Sb	Sn	Ta	V	Zr	Units				
	26X 11383	.	.	.	.	.	.	.	.	.	.	.	.	cast	40 mm Ø x 15 mm		
	CT E	.	.	.	.	.	.	.	.	.	.	.	.	cast	30-35 mm Ø x 20-25 mm		
	28X 6254	.	.	.	0.0364	.	.	.	.	.	.	.	.	cast	40 mm Ø x 17 mm		
	28X 06625	.	.	.	0.0219	.	.	.	.	.	.	.	.	wrought	40 mm Ø x ~15 mm		
	IARM 54F *	.	.	0.0012	0.016	(0.002)	.	.	(0.001)	(0.005)	0.014	(0.004)	.	wrought	31 mm Ø x 2 or 18 mm		
	ECRM 377-2	.	.	.	.	.	.	.	.	.	.	.	.	wrought	40 mm Ø x 20 mm		
	ECRM 377-1	.	.	.	.	.	.	.	.	.	.	.	.	wrought	40 mm Ø x 20 mm		
	BS 625A	0.0012	0.00012	0.0042	0.0112	0.0013	0.00003	0.00018	0.0008	0.0034	0.0151	.	.	wrought	38 mm Ø x 12 mm		
	28X 6253	.	.	.	0.093	.	.	.	.	0.057	.	.	.	cast	40 mm Ø x ~15 mm		
	26X 14182	.	.	.	.	.	.	.	.	.	.	.	.	cast	40 mm Ø x 15 mm		
	CT D	.	.	.	.	.	.	.	.	.	.	.	.	cast	30-35 mm Ø x 20-25 mm		
	BS H-6A	.	.	.	.	.	.	.	0.003	.	0.17	.	.	wrought	35 mm Ø x 12 mm		
	28X 6256	.	.	.	0.007	.	.	.	.	.	.	.	.	HIP	40 mm Ø x 13 mm		
	BS 625B	.	.	0.003	0.017	.	.	.	.	.	0.015	.	.	wrought	38 mm Ø x 12 mm		
	26X 11385	.	.	.	.	.	.	.	.	.	.	.	.	cast	40 mm Ø x 15 mm last		
	28X 6252	.	.	.	0.173	.	.	.	.	.	.	.	.	cast	40 mm Ø x 17 mm		
	BS 725	.	.	.	0.0051	.	.	.	.	.	.	.	.	wrought	38 mm Ø x 12 mm		
	26X 11384	.	.	.	.	.	.	.	.	.	.	.	.	cast	40 mm Ø x 15 mm		
	28X 6251	.	.	.	0.0431	.	.	.	.	.	.	.	.	cast	40 mm Ø x 17 mm		
	26X 11381	.	.	.	.	.	.	.	.	.	.	.	.	cast	40 mm Ø x 15 mm		
	28X 6255	.	.	.	0.099	.	.	.	.	0.194	.	.	.	c.cast	40 mm Ø x ~15 mm		

* Provisional Analysis

VARIOUS INCOLOY ALLOYS

= class, where 1 = CRM and 2 = RM

#	Number	Cr	B	Fe	Mn	Si	Ti	W	Al	C	Co	Cu	Mo	P	S	Ni
2	HH 5179A	22.20	.	.	0.87	0.38	0.46	.	0.30	0.042	.	0.26	.	0.012	0.003	34.13
2	HH 5157A	21.48	.	.	0.95	0.43	0.55	.	0.45	0.067	.	0.33	.	0.012	0.003	29.31
2	23X 8005	20.81	.	.	0.73	0.46	0.35	.	0.22	0.07	0.50	0.28	0.34	.	.	32.2
2	HH 5196A	20.66	.	.	1.05	0.45	1.13	.	0.31	0.036	.	0.24	.	0.011	0.002	31.46
2	23X 8002	20.48	.	.	0.68	0.47	0.32	.	0.29	0.06	0.54	0.28	0.34	.	.	32.1
2	23X 8004	19.72	.	.	0.70	0.53	0.34	.	0.31	0.06	0.53	0.30	0.33	.	.	31.8
2	HH 5300A	18.18	.	.	0.86	0.35	0.54	.	0.45	0.026	.	0.28	.	0.013	0.003	33.56
2	23X DS 2	17.81	.	.	1.00	2.07	0.17	.	0.04	0.06	0.48	0.30	0.30	.	.	37.4
1	221X HF4	17.3	1.07	5.82	0.15	6.49	.	0.76	.	0.38	0.094	0.05	0.05	.	0.009	.
2	23X DS 4	16.83	.	REM	1.02	2.01	0.20	.	0.037	0.05	0.48	0.30	0.29	.	.	37.1
2	23X DS 5	8.64	.	.	1.04	1.98	0.17	.	0.083	0.080	0.50	0.30	0.30	.	.	36.6
1	221X HF3	7.7	1.69	3.44	0.14	5.5	.	1.13	.	0.71	0.25	0.16	0.05	.	0.011	.
2	221X HF2	2.96	2.96	3.08	0.387	3.08	.	.	.	0.117	0.494	0.231	0.130	.	0.0106	.

Number	Bi	Se	Sn	Units
HH 5179A	.	.	.	wrought 44 mm Ø x 12 mm
HH 5157A	.	.	.	wrought 44 mm Ø x 12 mm
23X 8005	.	.	.	cast 40 mm Ø x 15 mm
HH 5196A	.	.	.	wrought 44 mm Ø x 12 mm
23X 8002	.	.	.	cast 40 mm Ø x 15 mm
23X 8004	.	.	.	cast 40 mm Ø x 15 mm
HH 5300A	.	.	.	wrought 41 mm Ø x 12 mm
23X DS 2	.	.	.	cast 40 mm Ø x 15 mm
221X HF4	.	.	0.68	cast 43 mm Ø x 20 mm
23X DS 4	.	.	.	cast 40 mm Ø x 15 mm
23X DS 5	.	.	.	cast 40 mm Ø x 15 mm
221X HF3	0.005	0.002	0.10	cast 43 mm Ø x 20 mm
221X HF2	0.0098	0.0048	.	cast 40 mm Ø x 15 mm

RM Cr/Nb NICKEL ALLOY

cast typical analysis 40 mm Ø x 15 mm

Number	Cr	Nb	Co	Cu	Fe	Mn	Mo	Si	W
25X 10230	21.9	7.04	0.59	0.12	0.76	0.35	6.06	0.34	3.83
25X 10231	20.58	6.76	0.11	0.06	0.55	0.13	6.00	0.14	2.67
25X 10221	20.0	7.43	0.26	0.11	0.62	0.28	6.57	0.45	2.23
25X 10235	19.87	7.25	0.53	0.26	1.26	0.53	5.85	0.56	3.14
25X 10225	18.27	7.00	0.30	0.12	0.55	0.29	5.95	0.25	1.74

RM Cr/Ti TYPE 'NIMONIC 80'

cast typical analysis 40 mm Ø x 15 mm

Number	Cr	Ti	Al	B	Co	Cu	Fe	Mn	Mo	Pb	Si	W	Zr
22X 808	19.73	2.14	1.41	0.014	0.03	<0.01	0.11	0.05	<0.01	0.007	0.10	0.11	0.038
22X 806	19.66	2.48	1.35	0.004	0.03	0.004	0.18	0.09	0.01	0.007	0.10	0.02	0.004

Number	Ag	As	Bi	C	Sb	Sn	Te	V
22X 808	0.007	0.013	0.002	.	0.017	0.030	0.008	0.05
22X 806	.	.	.	0.007	.	.	.	.

'MONEL' TYPE COPPER-NICKEL ALLOY

= class, where 1 = CRM and 2 = RM

Number	Cu	Al	Fe	Mn	Si	Ti	C	Co	Cr	Mg	Mo	Nb	P	Pb	S	Ni
1 212X 4002	32.41	0.081	1.022	1.68	0.090	0.0421	0.0369	0.064	0.084	0.0222	.	0.0318	.	0.0373	0.0019	64.33
2 IARM 202A	32.3	0.080	1.31	1.03	0.046	0.005	0.13	0.020	0.008	0.024	.	.	0.011	.	0.032	64.8
1 SS 363/1	31.90	0.027	1.86	1.26	0.028	(0.03)	0.140	0.032	(0.05)	.	.	.	.	.	(0.002)	Rem.
2 BS 405	31.80	0.10	1.34	1.03	0.04	0.003	0.13	0.025	0.006	0.026	(0.002)	(0.002)	0.010	.	0.041	65.49
1 IARM 51C	31.6	0.13	2.17	1.01	0.11	0.026	0.122	0.019	0.36	0.0096	0.072	0.003	0.010	<0.005	0.005	64.4
2 BS 400C	31.68	0.056	1.61	1.05	0.18	0.056	0.160	0.053	0.48	0.009	0.059	0.021	0.012	0.0007	0.001	64.559
2 BS 400-3	31.25	0.001	1.60	0.85	0.063	0.004	0.153	0.46	0.21	0.012	0.003	(0.0004)	0.026	(0.0015)	0.006	65.4
2 BS 400-1	30.97	0.004	1.27	1.07	0.16	0.007	0.109	0.37	0.033	0.048	0.001	0.0003	0.022	0.0020	0.008	66.0
2 BS 400-2	30.75	0.006	1.42	1.17	0.17	0.011	0.170	0.46	0.091	0.033	0.0012	0.0004	0.027	(0.001)	0.008	65.9
1 IARM 52C	30.6	2.98	1.04	0.89	0.14	0.55	0.153	0.005	0.046	0.0021	0.011	0.003	0.009	(0.0003)	0.002	(63.6)
1 212X 4003	30.48	0.086	1.24	1.00	0.293	(0.063)	0.0051	0.029	0.073	0.035	0.023	0.156	0.0054	0.0134	0.0069	66.58
1 SRM C1248	29.80	0.009	2.10	0.31	1.61	.	0.266	.	0.095	.	0.006	.	0.002	0.00038	0.0008	65.75
1 BS 500D	29.66	2.98	0.723	0.677	0.0700	0.446	0.154	0.0347	0.212	0.0110	0.0243	0.0073	0.0086	0.00028	0.00099	65.0
2 212X NA 2	29.6	.	1.53	1.06	2.50	.	0.07	.	.	0.008	.	.	.	0.02	0.023	.
1 212X NA 4	29.34	0.012	2.26	1.082	3.83	0.037	0.098	0.046	0.120	0.0014	0.026	(0.51)	0.0053	0.018	0.004	62.8
1 212X 4007	29.39	.	1.89	0.955	2.19	.	0.0219	.	.	.	.	2.30	0.015	0.022	0.0063	63.05
1 212X 4004	28.69	0.479	4.71	0.718	0.892	1.06	0.101	0.097	0.096	.	.	1.01	0.0203	0.040	0.0078	62.11
1 212X 4001	27.62	0.316	1.032	2.35	0.98	0.344	0.0460	0.107	0.143	0.16	.	.	0.0099	0.054	0.019	66.56
1 212X 4006	24.95	3.81	1.75	0.763	4.01	1.50	0.0241	0.042	0.120	0.107	.	0.538	.	0.016	0.0275	62.30
1 212X 4005	20.76	2.05	1.90	1.55	2.48	0.892	0.115	0.662	0.513	0.0304	0.035	0.330	0.013	0.025	0.0138	68.13

Number	Cu	Al	Fe	Mn	Si	Ti	C	Co	Cr	Mg	Mo	Nb	P	Pb	S	Ni
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Number	As	B	Bi	Ca	Cd	N	O	Sb	Sn	V	Zn	Zr	Units
212X 4002	cast ~40 mm Ø x ~15 mm
IARM 202A	0.0004	0.010	31 mm Ø x 2 or 18 mm
SS 363/1	.	.	.	.	.	.	.	.	.	.	.	.	wrought 38 mm Ø x 19 mm
BS 405	.	(0.001)	.	.	.	.	.	.	.	.	.	.	wrought 38 mm Ø x 12 mm
IARM 51C	.	.	.	.	.	0.0004	(0.002)	.	(0.001)	0.002	W:0.021	0.002	31 mm Ø x 2 or 18 mm
BS 400C	0.001	(0.0002)	.	.	.	.	.	(0.0002)	0.0009	(0.005)	(0.001)	.	wrought 38 mm Ø x 12 mm
BS 400-3	0.004	(0.0002)	.	.	.	.	.	(0.001)	0.0014	0.003	(0.001)	.	wrought 38 mm Ø x 20 mm
BS 400-1	0.004	(0.0005)	.	.	.	.	.	(0.0005)	0.0010	(0.001)	(0.0006)	.	wrought 38 mm Ø x 20 mm
BS 400-2	0.004	(0.0006)	.	.	.	.	.	(0.001)	0.0012	(0.003)	(0.001)	.	wrought 38 mm Ø x 20 mm
IARM 52C	.	(0.001)	.	.	.	(0.0002)	(0.001)	.	(0.001)	(0.003)	.	0.051	31 mm Ø x 2 or 18 mm
212X 4003	.	.	.	.	.	.	.	.	.	.	.	.	cast 43 mm Ø x 20 mm
SRM C1248	.	.	.	.	.	.	.	.	0.00011	.	0.0003	.	32 mm Ø x 19 mm
BS 500D	0.0015	0.00022	.	0.0030	Ta:0.00019	0.00015	0.00008	0.00006	(0.0004)	0.0020	W:0.0021	0.030	wrought 38 mm Ø x 12 mm
212X NA 2	.	.	.	.	.	.	.	.	.	.	.	.	cast 40 mm Ø x 15 mm
212X NA 4	.	.	.	.	.	.	.	.	.	.	.	.	cast 40 mm Ø x 13 mm
212X 4007	.	Be:0.0040	0.0490	.	0.0125	.	.	Se:0.023	0.0207	.	0.0183	.	cast ~40 mm Ø x ~15 mm
212X 4004	.	.	.	.	0.0023	.	.	.	.	.	.	.	cast 40 mm Ø x ~15 mm
212X 4001	.	.	.	.	.	.	.	.	.	.	.	.	cast 40 mm Ø x ~15 mm
212X 4006	cast 40 mm Ø x ~15 mm
212X 4005	cast 40 mm Ø x 15 mm

Number	As	B	Bi	Ca	Cd	N	O	Sb	Sn	V	Zn	Zr	Units
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Fe, Fe/Co, and Fe/Mo NICKEL ALLOY

= class, where 1 = CRM and 2 = RM

CT: 30-35 mm Ø x 20-25 mm

IARM: 31 mm Ø x 2 or 18 mm

SRM: 31-32 mm Ø x 19 mm

#	Number	Fe	Co	Cu	Mo	Al	B	C	Cr	Mn	Nb	Ni	P	S	Si	Ta	Ti	V
1	SRM 1159	51.0	0.022	0.038	0.01	.	.	0.007	0.06	0.30	.	48.2	0.003	0.003	0.32	.	.	.
1	SRM 1250	40.5	16.1	0.022	0.014	0.99	0.0078	0.022	0.077	0.052	2.99	37.78	<0.003	0.0025	0.097	0.003	1.48	0.077
2	IARM 203A	40.6	12.88	0.05	0.090	0.066	.	0.005	0.72	0.023	5.00	38.4	0.006	0.0009	0.41	.	1.58	.
1	SRM 1160	14.3	0.054	0.021	4.3	.	.	0.019	0.05	0.55	.	80.3	0.003	0.001	0.37	.	.	.
2	CT ISO133A	13.75	0.003	4.41	4.17	.	.	0.014	0.037	0.51	.	76.99	0.003	<0.001	.	Se: 0.145	.	.

Mo/Fe 'HASTELLOY' TYPE ALLOY

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

#	Number	Mo	Co	Cr	Fe	W	Ni	Al	C	Cu	Mn	N	P	S	Si	Ti	V
1	215X HB1	32.44	1.176	1.08	9.73	.	.	.	0.079	0.164	0.613	0.0207	(0.014)	0.048	0.24	.	0.454
1	215X HB2 *	32	0.55	0.68	4.15	.	Rem	0.18	0.048	0.06	0.75	0.011	0.007	0.02	0.40	0.13	0.48
1	215X HB3	29.9	1.014	0.303	5.06	(0.023)	61.59	.	0.0355	(0.027)	0.90	0.005	0.0239	0.0195	0.78	.	0.292
1	IARM 257A	28.0	0.024	1.57	1.47	0.07	67.9	0.34	0.005	0.019	0.63	0.0039	0.004	0.0005	0.024	0.002	0.01
1	215X HB4	27.59	1.71	0.414	7.02	(0.028)	61.21	.	0.079	(0.024)	0.666	0.0028	0.036	0.013	1.02	.	0.115
1	IARM 63C	26.6	0.013	0.10	1.13	0.03	71.1	0.11	0.010	0.003	0.76	0.0006	0.005	0.0005	0.01	0.15	0.007
2	BS H1B	26.52	<0.02	<0.01	1.00	.	(71.3)	0.12	0.006	(0.01)	0.82	.	0.003	0.0005	0.049	0.11	<0.01
1	215X HB5	26.1	2.49	0.123	3.45	.	65.3	0.49	0.151	0.268	0.335	0.006	0.038	0.0113	1.05	0.192	0.136
1	215X HC1	20.91	2.60	15.42	2.60	2.66	Rem	0.72	0.045	0.046	1.19	0.059	0.007	0.0086	(0.20)	0.264	0.090
1	215X HC2	19.28	1.72	16.19	4.02	3.92	52.09	(0.012)	0.090	.	1.036	0.092	0.012	0.24	0.79	(0.078)	0.362
1	215X HC3	17.90	0.99	17.05	7.87	4.32	.	0.188	0.197	0.319	0.920	0.064	0.022	0.055	1.11	0.35	0.263
1	SRM C2402	17.1	1.50	16.15	7.3	4.29	51.5	.	0.010	0.19	0.64	.	0.007	0.018	0.85	.	0.22
1	215X HC5 *	16.5	0.2	19	6.4	5.4	Rem	0.15	0.15	0.6	0.3	0.08	0.03	0.02	1.1	0.05	0.6
1	215X HC4	16.46	0.500	18.17	6.18	5.26	Rem	(0.073)	0.146	0.052	0.548	0.045	0.007	0.0306	0.264	0.149	0.444
1	215X HC6	16.14	1.16	15.67	5.00	3.22	58.45	0.066	0.005	0.57	0.099	0.0034	.	0.0021	(0.048)	0.003	0.112
1	IARM 258A	15.5	0.083	22.8	0.85	0.14	58.6	0.30	0.005	1.54	0.21	0.032	0.005	0.0007	0.015	0.003	0.014
1	IARM 66D *	15.37	0.036	14.81	5.47	3.24	60.1	0.19	0.0041	0.014	0.52	0.0036	0.005	0.0004	0.039	0.006	0.21
1	BS H2C	15.36	0.178	16.14	5.99	3.25	58.3	0.124	0.0027	0.116	0.415	0.0126	0.0086	0.00030	0.031	0.0172	0.0222
1	BS H2D	15.34	0.180	16.08	6.01	3.25	58.4	0.129	0.0025	0.117	0.414	0.0126	0.0081	0.00034	0.030	0.0129	0.022
2	BS H6A	13.37	1.11	21.37	4.34	3.09	(55.8)	0.24	0.005	0.070	0.31	.	0.010	<0.02	(0.03)	0.007	0.17
1	IARM 65C *	13.29	1.43	21.13	4.70	2.75	55.8	0.18	0.005	0.073	0.288	0.034	0.012	0.0006	0.04	0.005	0.010
2	BS H3B	8.84	1.96	22.23	19.92	0.49	44.9	0.14	0.078	0.27	0.11	.	0.013	0.0005	0.63	0.020	0.06
1	IARM 69D	8.78	1.67	21.13	17.7	0.49	48.1	0.21	0.090	0.075	0.72	0.029	0.012	0.0003	0.63	0.004	0.033
1	IARM 69C	8.32	1.11	21.6	18.3	0.62	48.7	0.11	0.068	0.069	0.47	0.0180	0.011	0.0005	0.35	0.017	0.033
1	IARM 67C *	4.93	1.74	28.9	13.44	1.96	45.8	0.14	0.006	1.25	1.04	0.035	0.011	0.0005	0.14	(0.006)	0.031

Number	As	B	Ca	Mg	Nb	O	Pb	Sb	Sn	Ta	Zr	Units
215X HB1	40 mm Ø x ~17 mm
215X HB2 *	0.24	.	.	.	.	.	.	~40 mm Ø x ~15 mm
215X HB3	43 mm Ø x 20 mm
IARM 257A	.	<0.003	.	0.010	<0.03	0.0004	<0.0005	.	<0.0005	<0.005	(0.008)	31 mm Ø x 2 or 18 mm
215X HB4	43 mm Ø x 20 mm
IARM 63C	.	0.003	.	0.003	0.002	0.0005	.	.	.	.	0.001	31 mm Ø x 2 or 18 mm
BS H1B	.	0.003	.	.	<0.005	.	.	.	.	.	.	38 mm Ø x 12 mm
215X HB5	.	0.003	.	.	.	.	.	.	.	.	.	40 mm Ø x ~15 mm
215X HC1	40 mm Ø x ~15 mm
215X HC2	.	(0.006)	.	.	.	.	.	.	.	.	.	40 mm Ø x 17 mm
215X HC3	.	0.0106	.	.	.	.	.	.	.	.	.	40 mm Ø x 17 mm
SRM C2402	32 mm Ø x 19 mm
215X HC5 *	~40 mm Ø x ~15 mm
215X HC4	40 mm Ø x ~15 mm
215X HC6	40 mm Ø x 13 mm HIP
IARM 258A	.	0.001	.	0.009	0.01	0.0009	<0.0005	.	<0.001	<0.01	<0.005	31 mm Ø x 2 or 18 mm
IARM 66D *	.	(0.001)	.	(0.001)	0.013	(0.0009)	(0.00001)	.	(0.001)	(0.004)	(0.005)	31 mm Ø x 2 or 18 mm
BS H2C	0.0008	0.0008	0.0004	0.0061	0.032	0.0012	0.00014	0.0006	0.0011	(0.00008)	(0.00012)	32 mm Ø x 19 mm
BS H2D	0.0010	0.0013	0.0004	0.0065	0.029	0.0012	(0.00009)	0.0006	0.0010	0.0005	0.0008	32 mm Ø x 19 mm
BS H6A	.	0.0012	.	.	(0.029)	.	.	.	0.003	.	.	35 mm Ø x 12 mm
IARM 65C *	.	(0.001)	.	0.0026	0.027	(0.001)	.	.	(0.001)	(0.02)	(0.004)	31 mm Ø x 2 or 18 mm
BS H3B	.	0.0052	.	.	0.28	.	.	.	.	.	.	38 mm Ø x 12 mm
IARM 69D	.	0.0044	.	0.0021	0.204	0.0012	0.00010	.	0.002	.	0.0074	31 mm Ø x 2 or 18 mm
IARM 69C	.	0.0034	.	0.0030	0.09	0.0017	(0.00003)	.	(0.002)	.	0.004	31 mm Ø x 2 or 18 mm
IARM 67C *	.	(0.001)	.	0.007	0.38	0.0014	.	.	0.0016	(0.005)	(0.002)	31 mm Ø x 2 or 18 mm

Ag: 1.2 ppm

CRM HIGH TEMPERATURE ALLOY SET

AVAILABLE IN SET/5 ONLY

30 mm Ø x 35 mm

Number	Al	Co	Cr	Cu	Mo	Nb	Ni	Ti
NCS HS57701-1	0.68	1.04	22.21	0.0015	4.03	6.79	43.89	1.42
NCS HS57701-2	0.62	1.03	20.14	0.0015	3.57	6.06	48.60	1.21
NCS HS57701-3	0.41	1.02	18.46	0.0018	3.08	5.15	52.47	0.94
NCS HS57701-4	0.31	1.03	16.86	0.0020	2.70	4.51	56.67	0.75
NCS HS57701-5	0.14	1.02	14.87	0.0020	2.29	3.85	60.00	0.59

RM NICKEL ALLOY XRF SET

Part Number: BS NI-18 Set of 18 samples, each 32 - 52 mm Ø x 7 mm discs

Grade	Number	Al	As	B	C	Co	Cr	Ct	Cl	Fe	Mg	Mn	Mo	N	Nb	Ni	O	P	Pb	S	Si	Sn	Ta	Ti	V	W	Zr
RA 333	BS 197A	0.18	.	0.0019	0.050	3.06	25.11	0.12	18.07	1.56	2.99	(0.052)	0.20	44.44	.	0.021	(0.0002)	<0.001	0.96	0.017	0.051	2.79	.	.	.	.
Haspalloy	BS 199A	1.26	.	(0.004)	0.033	13.47	19.25	0.022	1.05	0.014	3.99	.	0.040	57.8	.	0.006	.	<0.001	0.05	3.07	0.020	.	.	.	(0.04)	.	
Nickel 200	BS 200A	0.0281	0.0015	0.0044	0.078	0.0564	0.0006	0.0038	0.074	0.0131	0.151	0.0004	0.0004	99.54	0.0013	0.0007	(0.00005)	0.0037	0.0051	(0.0001)	(0.0003)	0.0427	0.0006	0.0005	(0.0004)	.	
Alloy 263	BS 263	0.38	.	(0.001)	0.071	19.92	19.84	0.024	0.47	0.36	5.70	.	0.04	(50.65)	.	0.005	.	<0.002	0.28	2.21	0.004	0.24	(0.002)	.	.	.	
Monel 400	BS 400C	0.056	0.0019	(0.0002)	0.160	0.053	0.48	31.68	1.61	0.009	1.05	0.059	.	0.021	64.55	.	0.012	0.0007	0.001	0.18	0.0009	.	0.056	(0.005)	.	.	
Monel® K500	BS 500D	2.98	0.0015	0.00021	0.152	0.0342	0.212	29.66	0.720	0.0112	0.678	0.0240	0.00017	0.0072	65.2	0.0007	0.0085	0.00028	0.0011	0.069	0.0004	(0.00005)	0.447	0.00211	0.0019	0.030	
Inconel® 600	BS 600C	0.20	.	0.0012	0.072	0.04	15.64	0.040	9.30	0.0056	0.50	0.027	0.0074	(0.014)	73.59	.	0.008	(0.002)	<0.002	0.39	0.002	(0.003)	0.21	0.022	(0.003)	.	
Inconel® 625	BS 625A	0.215	0.0012	0.0015	0.0241	0.066	21.71	0.073	3.06	0.0042	0.068	9.23	0.0112	3.60	61.3	0.0013	0.0065	0.00003	0.00049	0.080	0.0008	0.0034	0.287	0.0151	0.066	.	
Inconel® 690	BS 690	0.26	.	0.025	0.076	30.10	30.10	0.28	9.49	0.20	0.16	.	0.19	58.5	.	0.011	.	0.0010	0.39	0.32	.	.	.	.	.	.
Inconel® 718	BS 718A	0.57	.	0.0046	0.036	0.32	18.19	0.06	19.21	0.08	3.06	.	5.19	52.0	.	0.007	.	0.001	0.12	1.02	(0.03)	.	.	.	.	.
Inconel® X750	BS 750A	0.74	.	0.0033	0.047	0.29	15.68	0.04	7.07	0.09	0.22	.	1.07	71.9	.	(0.005)	.	0.0007	0.10	2.60	0.046	.	.	.	.	.
Inconel® 800	BS 800	0.279	0.0036	0.0032	0.073	0.054	19.90	0.323	46.0	(0.002)	0.789	0.195	0.0112	0.0183	31.29	(0.0009)	0.0161	0.00004	0.00036	0.560	0.0026	(0.001)	0.469	0.071	0.0056	0.0018	
Inconel® 825	BS 825A	(0.26)	.	(0.0020)	0.030	0.25	21.39	2.32	30.2	0.62	2.93	.	0.24	39.8	.	0.017	.	<0.001	0.45	1.05	0.13	.	.	.	.	.
Hastelloy B	BS H-1B	0.12	.	0.003	0.006	<0.02	<0.01	(0.01)	1.00	0.82	26.52	.	<0.005	[71.3]	.	0.003	.	0.0005	0.049	0.11	<0.01	.	.	.	.	.
Hastelloy C-276	BS H-2B	0.125	.	0.0052	0.078	1.96	22.23	0.27	19.92	0.57	15.54	.	0.029	56.75	.	0.010	.	0.0010	0.056	0.066	0.21	4.13	.	.	.	.
Hastelloy X	BS H-3B	0.14	.	0.0012	0.005	1.11	21.37	0.070	4.34	0.31	13.37	.	(0.028)	[55.8]	.	0.010	.	<0.002	(0.03)	0.007	0.17	3.09	.	.	.	.
Hastelloy C-22	BS H-6A	0.24	.	0.0028	0.004	2.58	29.43	1.66	14.61	0.0059	1.10	5.02	.	0.69	Rem	.	(0.01)	.	<0.001	0.20	.	.	0.008	0.038	2.66	.	
Hastelloy G-30	BS H-8	0.18	.	0.0028	0.004	2.58	29.43	1.66	14.61	0.0059	1.10	5.02	.	0.69	Rem	.	(0.01)	.	<0.001	0.20	.	.	0.008	0.038	2.66	.	

Nickel with brackets [] calculated by difference.
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ALLOY	NUMBER	ALLOY	NUMBER	ALLOY	NUMBER
20	IARM 25C	750	28X 7502	Monel	212X NA4
200	BS 200-1	750	28X 7504	MP 35N	SRM 1775
200	BS 200-2	750	BS 750B	Nimonic 80A	22X 801
200	BS 200-4	750	HT 8209X	Nimonic 80A	22X 803
200	BS 200A	750	HT 8211X	Nimonic 80A	22X 804
200	IARM 50B	750	IARM 57D	Nimonic 80A	22X 805
200	IARM 187A	800	23X 8002	Nimonic 80A	22X 806
200	IARM 188A	800	23X 8004	Nimonic 90	22X 902
200	IARM 189A	800	23X 8005	Nimonic 90	22X 903
200	IARM 190A	800	BS 800	Nimonic 90	22X 904
200	IARM 191A	800	IARM 58B	Nimonic 90	22X 905
200	IARM 192A	800	SRM 1246	Nimonic 90	SS 310/1
205	BS 200-3	801	HH 5196A	R-405	IARM 202A
263	24X 10999	825	SRM 1247	RA 333	BS 197A
263	BS 263	825	BS 825D	RA 333	BS 197B
330	IARM 7B	825	BS 825E	RA 333	IARM 60B
330	IARM 7C	901	22X 9014	Rene 41	IARM 325A
400	212X 4002	901	SS 387/1	Rene 77	IARM 277A
400	212X 4003	902	221X HF3	Waspaloy	24X 7201
400	BS 400-1	903	SRM 1250	Waspaloy	24X WASP1
400	BS 400-2	909	IARM 203A	Waspaloy	24X WASP2
400	BS 400-3	925	BS 925	Waspaloy	24X WASP3
400	BS 400C	AL-6XN	IARM 157C	Waspaloy	24X 07001
400	IARM 51B	B1900	IARM 283A	Waspaloy	BS 199A
400	SS 363/1	ERNiCr-E	221X HF4	Waspaloy	IARM 62E
405	BS 405	Hastelloy	215X HB2	Waspaloy	SRM 1243
500	BS 500D	Hastelloy	215X HB4		
500	IARM 52C	Hastelloy	215X HB5		
556	IARM 100C	Hastelloy	215X HC1		
600	28X 6001	Hastelloy	215X HC2		
600	28X 6002	Hastelloy	215X HC3		
600	28X 6003	Hastelloy	215X HC4		
600	28X 6004	Hastelloy	215X HC5		
600	28X 6005	Hastelloy B	215X HB1		
600	BS 600-1	Hastelloy B	215X HB3		
600	BS 600-2	Hastelloy B	BS H1B		
600	BS 600-3	Hastelloy B-2	IARM 63B		
600	BS 600-4	Hastelloy B-2	IARM 63C		
600	BS 600-5	Hastelloy B-4	IARM 257A		
600	BS 600-6	Hastelloy C	SRM C2402		
600	BS 600C	Hastelloy C-2000	IARM 258A		
600	IARM 53D	Hastelloy C-22	BS H6A		
600	IARM 53E	Hastelloy C-22	IARM 65C		
600	SRM 1244	Hastelloy C-276	215X HC6		
617	BS 617	Hastelloy C-276	BS H2C		
625	28X 6251	Hastelloy C-276	BS H2D		
625	28X 6252	Hastelloy C-276	IARM 66D		
625	28X 6253	Hastelloy G-30	IARM 67C		
625	28X 6254	Hastelloy X	BS H3B		
625	28X 6255	Hastelloy X	IARM 69C		
625	28X 06625	Hastelloy X	IARM 69D		
625	BS 625A	Haynes 242	IARM 55B		
625	BS 625B	IN 100	210X 11980		
625	ECRM 377-1	IN 100	IMZ 182		
625	ECRM 377-2	IN 100	SS 345		
625	IARM 54F	IN 100 + Zr	210X 11981		
690	IARM 201A	Incoloy	23X 8001		
713	211X 11221	Incoloy	23X DS2		
713	211X 11222	Incoloy	23X DS3		
713	211X 11233	Incoloy	23X DS4		
713	SS 350	Incoloy	23X DS5		
718	28X 7181	Incoloy	HH 5157A		
718	28X 7182	Incoloy	HH 5179A		
718	28X 7183	Incoloy	HH 5300A		
718	28X 7184	Inconel	28X 6256		
718	28X 7185	Magnetic	SRM 1159		
718	28X 7186	Magnetic	SRM 1160		
718	28X 07718	Monel	212X 4001		
718	BS 718B	Monel	212X 4004		
718	SRM 1249	Monel	212X 4005		
718	SS 351	Monel	212X 4006		
725	BS 725	Monel	212X NA2		
738	IMZ 183	Monel	212X NA3		

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

The best efforts have been made in the construction of this chart. Some samples do not perfectly fit the alloy specifications, but are considered acceptable for the purposes of calibration and type standardization.

Type	Comment	Al	B	C	Co	Cr	Cu	Fe	Mn	Mo	Nb
20 CB3 Mod		.	.	<0.035	.	19.0-21.0	3.0-4.0	rem	1.5-2.5	2.0-3.0	8\mtC-0.4
20 Mo-6HS	N 0.17-0.40	.	.	<0.06	.	22.0-26.0	1.0-3.0	rem	<1.00	5.00-6.70	.
31	N 0.15-0.25	.	.	<0.015	.	26.0-28.0	1.0-1.4	rem	<2.00	6.0-7.0	.
52		<0.10	.	<0.05	<0.50	<0.25	.	rem	<0.60	.	.
59		0.10-0.40	.	<0.010	<0.30	22.0-24.0	<0.50	<1.50	<0.50	15.0-16.5	.
100	V 0.7-1.2	5.00-6.00	0.01-0.02	0.15-0.20	13.0-17.0	8.0-11.0	.	<1.00	<0.20	2.0-4.0	.
102	Mg 0.01-0.05	0.30-0.60	0.003-0.008	<0.08	.	14.0-16.0	.	5.0-9.0	<0.75	2.75-3.25	2.75-3.25
200		.	.	<0.15	.	.	<0.25	<0.40	<0.35	.	.
201		.	.	<0.02	.	.	<0.25	<0.40	<0.35	.	.
205	Mg 0.01-0.08	.	.	<0.15	.	.	<0.15	<0.20	<0.35	.	.
211		.	.	<0.20	.	.	<0.25	<0.75	4.25-5.25	.	.
214	Y 0.002-0.04	4.0-5.0	<0.006	<0.05	<2.0	15.0-17.0	.	2.0-4.0	<0.50	<0.50	.
220	Mg 0.01-0.08	.	.	<0.15	.	.	<0.10	<0.20	<0.20	.	.
225	Mg 0.01-0.08	.	.	<0.15	.	.	<0.10	<0.10	<0.20	.	.
230	Mg 0.04-0.08	.	.	<0.15	.	.	<0.10	<0.10	<0.15	.	.
230	La 0.005-0.05	0.20-0.50	<0.015	0.05-0.15	<5.00	20.0-24.0	.	<3.00	0.30-1.00	1.0-3.0	.
233	Mg 0.01-0.10	.	.	<0.15	.	.	<0.10	<0.10	<0.30	.	.
270	Mg <0.001	.	.	<0.02	<0.001	<0.001	<0.001	<0.005	<0.001	.	.
300	Mg 0.20-0.50	.	.	<0.40	.	.	<0.25	<0.60	<0.50	.	.
301		4.00-4.75	.	<0.30	.	.	<0.25	<0.60	<0.50	.	.
400		.	.	<0.03	.	.	rem	<2.50	<2.00	.	.
401		.	.	<0.10	<0.25	.	.	<0.75	<2.25	.	.
404		<0.05	.	<0.15	.	.	rem	<0.50	<0.10	.	.
502		2.5-3.5	.	<0.10	.	.	rem	<2.00	<1.50	.	.
520		1.8-2.2	<0.010	<0.06	12.0-14.0	18.0-20.0	.	.	.	5.0-7.0	.
600		.	.	<0.15	.	14.0-17.0	<0.50	6.0-10.0	<1.00	.	.
601		1.0-1.7	.	<0.10	.	21.0-25.0	<1.00	rem	<1.00	.	.
603GT	Y 0.05-0.15	2.4-3.0	.	0.20-0.40	.	24.0-26.0	<0.50	8.0-11.0	<0.15	.	.
617		0.80-1.50	<0.006	0.05-0.15	10.0-15.0	20.0-24.0	<0.50	<3.00	<1.00	8.0-10.0	.
625		<0.40	.	<0.10	.	20.0-23.0	.	<5.00	<0.50	8.0-10.0	3.15-4.15
625LCF	N <0.02	<0.40	.	<0.03	<1.0	20.0-23.0	.	<5.00	<0.50	8.0-10.0	3.15-4.15
686		.	.	<0.01	.	19.0-23.0	.	<5.00	<0.75	15.0-17.0	.
690		.	.	<0.05	.	27.0-31.0	<0.50	7.0-11.0	<0.50	.	.
702		2.75-3.75	.	<0.10	.	14.0-17.0	<0.50	<2.00	<1.00	.	.
706		<0.40	<0.006	<0.06	.	14.5-17.5	<0.30	rem	<0.35	.	2.5-3.3
713		5.5-6.5	0.005-0.015	0.08-0.20	.	12.0-14.0	.	<2.50	<0.25	3.8-5.2	1.8-2.8
718		0.20-0.80	<0.006	<0.08	<1.0	17.0-21.0	<0.30	rem	<0.35	2.8-3.3	4.75-5.50
718SPF	N <0.01	0.20-0.80	<0.006	<0.05	<1.0	17.0-21.0	<0.30	rem	<0.35	2.8-3.3	4.75-5.50
720		2.0-3.0	<0.02	<0.03	14.0-16.0	15.0-17.0	.	.	.	2.5-3.5	.
721		<0.10	.	<0.07	.	15.0-17.0	<0.20	<8.00	2.00-2.50	.	.
722		0.4-1.0	.	<0.08	.	14.0-17.0	<0.50	5.0-9.0	<1.00	.	.
725		<0.35	.	<0.03	.	19.0-22.5	.	rem	<0.35	7.0-9.5	2.75-4.00
751		0.90-1.50	.	<0.10	.	14.0-17.0	<0.50	5.0-9.0	<1.00	.	0.7-1.2
800		<0.15-0.60	.	<0.10	.	19.0-23.0	<0.75	rem	<1.50	.	.
800H		0.15-0.60	.	0.05-0.10	.	19.0-23.0	<0.75	rem	<1.50	.	.
800HT	Al+Ti 0.85-1.20	0.15-0.60	.	0.06-0.10	.	19.0-23.0	<0.75	>39.5	<1.50	.	.
801		.	.	<0.10	.	19.0-22.0	<0.50	rem	<1.50	.	.
802		0.15-1.00	.	0.20-0.50	.	19.0-23.0	<0.75	rem	<1.50	.	.
804		<0.60	.	<0.10	.	28.0-31.0	<0.50	rem	<1.50	.	.
825		<0.02	.	<0.05	.	19.5-23.5	1.5-3.0	rem	<1.00	2.5-3.5	.
901		<0.35	0.010-0.020	<0.10	.	11.0-14.0	<0.50	rem	<1.00	5.00-7.00	.
903		0.30-1.15	<0.012	<0.06	13.0-17.0	<1.0	<0.50	rem	<1.00	.	2.4-3.5
908		0.75-1.25	<0.012	<0.03	<0.50	3.75-4.5	<0.50	rem	<1.00	.	2.7-3.3
926		<0.3	.	<0.04	.	14.0-18.0	3.5-5.5	>39.0	<1.50	2.5-3.5	.
2120	N 0.02-0.15	<0.40	.	<0.010	<0.30	20.0-23.0	<0.50	<1.50	<0.50	19.0-21.0	.

Type	Ni	P	S	Si	Ti	W	Zr
20 CB3 Mod	32.0-36.0	<0.020	<0.015	<0.30	.	.	.
20 Mo-6HS	33.0-37.2	<0.030	<0.030	<0.50	.	.	.
31	30.0-32.0	<0.030	<0.005	<0.05	.	.	.
52	50.5	<0.025	<0.025	<0.30	.	.	.
59	rem	<0.015	<0.010	<0.10	.	.	.
100	rem	<0.015	<0.015	<0.20	4.5-5.0	.	0.03-0.09
102	rem	<0.010	<0.010	<0.40	0.4-0.7	2.72-3.25	0.01-0.05
200	>99.0	.	<0.010	<0.35	.	.	.
201	>99.0	.	<0.010	<0.35	.	.	.
205	>99.0	.	<0.008	<0.15	0.01-0.05	.	.
211	>93.7	.	<0.015	<0.15	.	.	.
214	rem	<0.015	<0.015	<0.20	<0.50	<0.05	<0.05
220	>99.0	.	<0.008	0.01-0.05	0.01-0.05	.	.
225	>99.0	.	<0.008	0.15-0.25	0.01-0.05	.	.
230	>99.0	.	<0.008	0.010-0.035	<0.005	.	.
230	rem	<0.030	<0.015	0.25-0.75	.	13.0-15.0	.
233	>99.0	.	<0.008	<0.10	<0.005	.	.
270	>99.97	.	<0.001	<0.001	<0.001	.	.
300	>97.0	.	<0.010	<0.35	0.20-0.60	.	.
301	>93.0	.	<0.010	<1.00	0.25-1.00	.	.
400	63.0-70.0	.	<0.024	<0.50	.	.	.
401	40.0-45.0	.	<0.015	<0.25	.	.	.
404	52.0-57.0	.	<0.024	<0.10	.	.	.
502	63.0-70.0	.	<0.010	<0.50	<0.50	.	.
520	rem	.	.	.	2.8-3.2	0.8-1.2	.
600	>72.0	.	<0.015	<0.50	.	.	.
601	58.0-63.0	.	<0.015	<0.50	.	.	.
603GT	rem	<0.020	<0.010	<0.50	0.01-0.25	.	0.01-0.10
617	>44.5	.	<0.015	<1.00	<0.06	.	.
625	rem	<0.015	<0.015	<0.50	<0.40	.	.
625LCF	>58.0	<0.015	<0.015	<0.15	<0.40	.	.
686	rem	<0.040	<0.020	<0.08	0.02-0.25	3.0-4.4	.
690	>58.0	.	<0.015	<0.50	.	.	.
702	rem	.	<0.010	<0.70	0.25-1.00	.	.
706	39.0-44.0	<0.020	<0.015	<0.35	1.5-2.0	.	.
713	rem	.	.	<0.50	0.5-1.0	.	0.05-0.15
718	50.0-55.0	<0.015	<0.015	<0.35	0.65-1.15	.	.
718SPF	50.0-55.0	<0.015	<0.002	<0.35	0.65-1.15	.	.
720	rem	.	.	.	4.5-5.5	1.0-2.0	<0.05
721	rem	.	<0.010	<0.15	2.75-3.35	.	.
722	>70.0	.	<0.010	<0.07	2.00-2.75	.	.
725	55.0-59.0	<0.015	<0.010	<0.20	1.0-1.7	.	.
751	>70.0	.	<0.010	<0.50	2.0-2.6	.	.
800	30.0-35.0	<0.045	<0.015	<1.00	0.15-0.60	.	.
800H	30.0-35.0	<0.045	<0.015	<1.0	0.15-0.60	.	.
800HT	30.0-35.0	<0.045	<0.015	<1.0	0.15-0.60	.	.
801	30.0-34.0	.	<0.015	<1.0	0.75-1.5	.	.
802	30.0-35.0	.	<0.015	<0.75	0.25-1.25	.	.
804	39.0-43.0	.	<0.015	<0.75	<1.20	.	.
825	38.0-46.0	<0.030	<0.030	<0.50	0.6-1.2	.	.
901	40.0-45.0	.	<0.030	<0.60	2.35-3.10	.	.
903	36.0-40.0	.	<0.015	<0.35	1.00-1.25	.	.
908	47.0-51.0	<0.015	<0.005	<0.50	1.2-1.8	.	.
926	26.0-30.0	<0.015	<0.015	<0.75	1.5-2.3	.	.
2120	rem	<0.015	<0.010	<0.10	.	<0.30	.

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FOR 750 see X750 (last chart)

Type	Comment	Al	B	C	Co	Cr	Cu	Fe	Mn	Mo	Nb
ACI CN-7M	.	.	.	<0.07	.	19.0-22.0	3.0-4.0	rem	<1.50	2.00-3.00	.
ACI CY-40	.	.	.	<0.40	.	14.0-17.0	.	<11.0	<1.50	.	.
ACI CZ-100	.	.	.	<1.00	.	.	<1.25	<3.00	<1.50	.	.
ACI HT	.	.	.	0.35-0.75	.	13.0-17.0	.	rem	<2.00	<0.50	.
ACI HT-30	.	.	.	0.25-0.35	.	13.0-17.0	.	rem	<2.00	<0.50	.
ACI HT-50	.	.	.	0.40-0.60	.	15.0-19.0	.	rem	<1.50	<0.50	.
ACI HT-50C	.	.	.	0.40-0.60	.	13.0-17.0	.	rem	.	<0.50	0.75-1.25
ACI HU	.	.	.	0.35-0.75	.	17.0-21.0	.	rem	<2.00	<0.50	.
ACI HU-50	.	.	.	0.40-0.60	.	17.0-21.0	.	rem	<1.50	<0.50	.
ACI HW	.	.	.	0.35-0.75	.	10.0-14.0	.	rem	<2.00	<0.50	.
ACI HW-50	.	.	.	0.40-0.60	.	10.0-14.0	.	rem	<1.50	<0.50	.
ACI HX	.	.	.	0.35-0.75	.	15.0-19.0	.	rem	<2.00	<0.50	.
ACI HX-50	.	.	.	0.40-0.60	.	15.0-19.0	.	rem	<1.50	<0.50	.
AF2-1DA	Ta 1-2; B, N, O, Pb limits	4.20-4.80	0.01-0.02	0.30-0.35	9.50-10.50	11.5-12.5	.	<1.00	<0.10	2.50-3.50	.
AL-6X	.	.	.	<0.035	.	20.0-22.0	.	rem	<2.00	6.0-7.0	.
AL-6XN	N 0.18-0.25	.	.	<0.030	.	20.0-22.0	.	rem	<2.00	6.0-7.0	.
Allcorr	.	<1.50	.	<0.15	<12.0	27.0-33.0	.	.	.	8.0-12.0	<2.00
Alumel	.	1.75-2.25	.	<0.15	.	.	.	<0.50	2.00-3.00	.	.
ARMCO 20-45-5	.	.	.	<0.08	.	18.0-22.0	.	rem	3.0-7.0	1.5-3.0	<0.40
Astroloy M	Bi, N, Pb limits	3.85-4.15	0.020-0.030	0.02-0.06	16.0-18.0	14.0-16.0	<0.10	<0.50	<0.15	4.50-5.50	.
B-2	.	.	.	<0.02	<1.0	<1.0	.	<2.00	<1.00	26.0-30.0	.
B-3	Ni+Mo 94.0-98.0; Ta, V <0.20	<0.50	.	<0.01	<3.0	1.0-3.0	<0.20	1.0-3.0	<3.00	27.0-32.0	<0.20
B-4	.	0.10-0.50	.	<0.01	<2.5	0.5-1.5	<0.50	1.0-6.0	<1.50	26.0-30.0	.
B-10	.	<0.5	.	<0.01	<1.0	6.0-10.0	<0.50	5.0-8.0	<1.00	21.0-25.0	.
Be-Ni	Be 1.85-2.05	.	.	.	.	.	.	.	.	.	.
BNI-1	Se <0.005, Other <0.50	<0.05	2.75-3.50	0.6-0.9	<0.10	13.0-15.0	.	4.0-5.0	.	.	.
BNI-1a	Se <0.005, Other <0.50	<0.05	2.75-3.50	<0.06	<0.10	13.0-15.0	.	4.0-5.0	.	.	.
BNI-2	Se <0.005, Other <0.50	<0.05	2.75-3.50	<0.06	<0.10	6.0-8.0	.	2.5-3.5	.	.	.
BNI-3	Se <0.005, Other <0.50	<0.05	2.75-3.50	<0.06	<0.10	.	.	<0.50	.	.	.
BNI-4	Se <0.005, Other <0.50	<0.05	1.50-2.20	<0.06	<0.10	.	.	<1.50	.	.	.
BNI-5	Se <0.005, Other <0.50	<0.05	<0.03	<0.10	<0.10	18.5-19.5	.	.	.	.	.
BNI-5a	Se <0.005, Other <0.50	<0.05	1.0-1.5	<0.10	<0.10	18.5-19.5	.	<0.50	.	.	.
BNI-5b	Se <0.005, Other <0.50	<0.05	1.0-1.6	<0.06	<1.0	14.5-15.5	.	<1.00	.	.	.
BNI-6	Se <0.005, Other <0.50	<0.05	.	<0.01	<0.10	.	.	.	.	.	.
BNI-7	Se <0.005, Other <0.50	<0.05	<0.010	<0.08	<0.10	13.0-15.0	.	<0.20	<0.04	.	.
BNI-8	Se <0.005, Other <0.50	<0.05	.	<0.10	<0.10	.	4.0-5.0	.	21.5-24.5	.	.
BNI-9	Se <0.005, Other <0.50	<0.05	3.25-4.00	<0.06	<0.10	13.5-16.5	.	<1.50	.	.	.
BNI-10	Se <0.005, Other <0.50	<0.05	2.00-3.00	0.40-0.55	<0.10	10.0-13.0	.	2.5-4.5	.	.	.
BNI-11	Se <0.005, Other <0.50	<0.05	2.20-3.10	0.30-0.50	<0.10	9.0-11.75	.	2.5-4.5	.	.	.
BNI-12	Se <0.005, Other <0.50	<0.05	<0.02	<0.06	<0.10	24.0-26.0	.	<0.20	.	.	.
BNI-13	Se <0.005	<0.05	2.75-3.50	<0.06	<0.10	7.0-9.0	2.0-3.0	<0.40	.	1.5-2.5	1.5-2.35

Type	Ni	P	S	Si	Ti	W	Zr
ACI CN-7M	27.5-30.5	.	.	<1.50	.	.	.
ACI CY-40	rem	.	.	<3.00	.	.	.
ACI CZ-100	rem	.	.	<2.00	.	.	.
ACI HT	33.0-37.0	<0.040	<0.040	<2.50	.	.	.
ACI HT-30	33.0-37.0	<0.040	<0.040	<2.50	.	.	.
ACI HT-50	33.0-37.0	<0.040	<0.040	0.50-2.00	.	.	.
ACI HT-50C	33.0-37.0	.	.	.	.	.	.
ACI HU	37.0-41.0	<0.040	<0.040	<2.50	.	.	.
ACI HU-50	37.0-41.0	<0.040	<0.040	0.50-2.00	.	.	.
ACI HW	58.0-62.0	<0.040	<0.040	<2.50	.	.	.
ACI HW-50	58.0-62.0	<0.040	<0.040	0.50-2.00	.	.	.
ACI HX	64.0-68.0	<0.040	<0.040	<2.50	.	.	.
ACI HX-50	64.0-68.0	<0.040	<0.040	0.50-2.00	.	.	.
AF2-1DA	rem	<0.015	<0.015	<0.10	2.75-3.25	5.50-6.50	0.05-0.15
AL-6X	23.5-25.5	<0.030	<0.030	<1.00	.	.	.
AL-6XN	23.5-25.5	<0.040	<0.030	<1.00	.	.	.
Allcorr	rem	.	.	.	<1.50	<4.00	.
Alumel	rem	.	.	<1.60	.	.	.
ARMCO 20-45-5	43.0-49.0	<0.045	<0.030	<1.00	.	.	.
Astroloy M	rem	<0.015	<0.015	<0.20	3.35-3.65	<0.05	<0.06
B-2	rem	<0.040	<0.030	<0.10	.	.	.
B-3	>65.0	<0.030	<0.010	<0.10	<0.20	<3.00	<0.10
B-4	rem	<0.040	<0.010	<0.05	.	.	.
B-10	rem	<0.025	<0.010	<0.10	.	.	.
Be-Ni	rem	.	.	.	0.4-0.6	.	.
BNI-1	rem	<0.020	<0.020	4.0-5.0	<0.05	.	<0.05
BNI-1a	rem	<0.020	<0.020	4.0-5.0	<0.05	.	<0.05
BNI-2	rem	<0.020	<0.020	4.0-5.0	<0.05	.	<0.05
BNI-3	rem	<0.020	<0.020	4.0-5.0	<0.05	.	<0.05
BNI-4	rem	<0.020	<0.020	3.0-4.0	<0.05	.	<0.05
BNI-5	rem	<0.020	<0.020	9.75-10.5	<0.05	.	<0.05
BNI-5a	rem	<0.020	<0.020	7.0-7.5	<0.05	.	<0.05
BNI-5b	rem	<0.020	<0.020	7.0-7.5	<0.05	.	<0.05
BNI-6	rem	10.0-12.0	<0.020	.	<0.05	.	<0.05
BNI-7	rem	9.7-10.5	<0.020	<0.10	<0.05	.	<0.05
BNI-8	rem	<0.020	<0.020	6.0-8.0	<0.05	.	<0.05
BNI-9	rem	<0.020	<0.020	.	<0.05	.	<0.05
BNI-10	rem	<0.020	<0.020	3.0-4.0	<0.05	15.0-17.0	<0.05
BNI-11	rem	<0.020	<0.020	3.25-4.25	<0.05	11.50-12.75	<0.05
BNI-12	rem	9.0-11.0	<0.020	<0.10	<0.05	.	<0.05
BNI-13	rem	<0.020	<0.020	3.8-4.8	<0.05	.	<0.05

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Type	Comment	Al	B	C	Co	Cr	Cu	Fe	Mn	Mo	Nb
Comm.Pure Ni	Mg <0.005	.	.	<0.02	<0.10	<0.005	<0.01	<0.05	<0.003	.	.
Comm.Pure Ni	Mg, N <0.001; O <0.025	<0.001	.	<0.006	.	<0.001	<0.02	<0.015	<0.001	.	.
Creusot UR SB 8	N 0.17-0.25	.	.	<0.020	.	24.0-26.0	1.0-2.0	rem	<2.00	4.7-5.7	.
CT15C	.	.	.	0.05-0.15	.	19.0-21.0	.	rem	0.15-1.50	.	0.50-1.50
D979	Zr <0.05	0.75-1.30	0.008-0.015	<0.08	.	14.0-16.0	.	rem	<0.75	3.75-4.50	.
Eatonite	.	.	.	2.4	10.0	29.0	.	<6.50	.	.	.
Eatonite 3	.	.	.	1.80-2.20	.	28.0-30.0	.	1.0-8.0	<1.00	4.0-6.0	.
Eatonite 5	.	.	.	1.80-2.20	.	28.0-30.0	.	1.0-8.0	<1.00	7.0-9.0	.
ER330	.	.	.	0.18-0.25	.	15.0-17.0	<0.75	rem	1.0-2.5	<0.75	.
ERNi-C1	Other <1.00	.	.	<1.00	.	.	<4.00	<4.00	<2.50	.	.
ERNiCr-6	Pb <0.010	<0.40	.	0.08-0.15	.	19.0-21.0	<0.50	<2.00	<1.00	.	.
ERNiCr-A	Se <0.005	.	2.00-3.00	0.30-0.60	<1.50	8.0-14.0	.	1.25-3.25	.	.	.
ERNiCr-C	Se <0.005	.	2.00-4.00	0.40-0.80	<1.25	10.0-16.0	.	3.0-5.0	.	.	.
ERNiCr-C	Se <0.005	.	2.50-4.50	0.50-1.00	<1.0	12.0-18.0	.	3.5-5.5	.	.	.
ERNiCr-D	.	.	0.35-0.60	0.6-1.1	<0.10	8.0-12.0	.	1.0-5.0	.	.	.
ERNiCr-E	Sn 0.5-0.9	.	0.7-1.4	0.1-0.5	<0.10	15.-20.	.	3.5-7.5	.	.	.
ERNiCrMo-5A	V <0.40	.	.	<0.12	.	14-18	.	4.0-7.0	<1.00	14-18	.
ERNi-Cu-8	Pb <0.010	2.0-4.0	.	<0.25	.	.	rem	<2.00	<1.50	.	.
ERNiFeMn-C1	Other <1.00	<1.00	.	<0.50	.	.	<2.50	rem	10.0-14.0	.	.
ERNiMo-8	.	.	.	<0.10	.	0.5-3.5	<0.50	.	<1.00	18.0-21.0	.
ERNiMo-9	.	<1.00	.	<0.10	.	.	0.3-1.3	.	<1.00	19.0-22.0	.
Filler 72	Other <0.50	.	.	0.01-0.10	.	42.0-46.0	<0.50	<0.50	<0.20	.	.
FM 52	Al+Ti <1.50	<1.10	.	<0.04	.	28.0-31.5	<0.30	7.0-11.0	<1.00	<0.50	<0.10
FM60	.	<1.25	.	<0.15	.	.	rem	<2.50	<4.00	.	.
FM61	.	<1.50	.	<0.15	.	.	<0.25	<1.00	<1.00	.	.
FM65	<0.20	.	.	<0.05	.	19.5-23.5	1.5-3.0	>22.0	<1.00	2.5-3.5	.
FM69	0.40-1.00	.	.	<0.08	.	14.0-17.0	<0.50	5.0-9.0	<1.00	>70.0	0.7-1.2
FM82	.	.	.	<0.10	.	18.0-22.0	<0.50	<3.00	2.5-3.5	.	2.0-3.0
FM92	.	.	.	<0.08	.	14.0-17.0	<0.50	<8.00	2.00-2.75	.	.

Type	Ni	P	S	Si	Ti	W
Comm.Pure Ni	>99.9	.	<0.003	<0.005	<0.005	.
Comm.Pure Ni	rem	.	<0.0008	<0.001	.	.
Creusot UR SB 8	24.0-26.0	<0.025	<0.010	<0.50	.	.
CT15C	31.0-34.0	<0.030	<0.030	0.50-1.50	.	.
D979	42.0-48.0	<0.015	<0.015	<0.75	2.70-3.30	3.75-4.50
Eatonite	39.0	.	.	0.70	.	15.0
Eatonite 3	rem	<0.030	<0.030	0.8-1.2	.	.
Eatonite 5	rem	<0.030	<0.030	0.80-1.20	.	.
ER330	34.0-37.0	<0.030	<0.030	0.30-0.65	.	.
ERNi-C1	rem	.	<0.030	<0.75	.	.
ERNiCr-6	>75.0	<0.030	<0.015	<0.30	0.15-0.50	.
ERNiCr-A	rem	.	.	1.25-3.25	.	.
ERNiCr-C	rem	.	.	3.0-5.0	.	.
ERNiCr-C	rem	.	.	3.5-5.5	.	.
ERNiCr-D	rem	.	.	4.0-6.6	.	1.0-3.0
ERNiCr-E	.	.	.	5.5-8.0	.	0.5-1.5
ERNiCrMo-5A	rem	.	.	<1.00	.	3.0-5.0
ERNi-Cu-8	63.0-70.0	<0.030	<0.015	<1.00	0.25-1.00	.
ERNiFeMn-C1	35.0-45.0	<0.030	<0.030	<1.00	.	.
ERNiMo-8	>60.0	<0.015	<0.015	<0.50	.	2.0-4.0
ERNiMo-9	>65.0	<0.015	<0.015	<0.50	.	2.0-4.0
Filler 72	rem	<0.020	<0.015	<0.20	0.3-1.0	.
FM 52	rem	.	<0.015	<0.50	<1.00	.
FM60	62.0-69.0	<0.020	<0.015	<1.25	1.5-3.0	.
FM61	>93.0	<0.030	<0.015	<0.75	2.0-3.5	.
FM65	38.0-46.0	<0.030	<0.030	<0.50	0.60-1.2	.
FM69	.	<0.030	<0.015	<0.50	2.00-2.75	.
FM82	>67.0	<0.030	<0.015	<0.50	<0.75	.
FM92	>67.0	<0.030	<0.015	<0.35	2.50-3.50	.

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Type	Comment	Al	B	C	Co	Cr	Cu	Fe	Mn	Mo
Hastelloy B	V <0.60	.	.	<0.12	<2.5	<1.00	.	<6.00	<1.00	26.0-33.0
Hastelloy C	V <0.35	.	.	<0.08	<2.5	14.5-16.5	.	4.0-7.0	<1.00	15.0-17.0
Hastelloy C-4	.	.	.	<0.015	<2.0	14.0-18.0	<3.00	.	<1.00	14.0-17.0
Hastelloy C-22	V <0.35	.	.	<0.015	<2.5	20.0-22.5	.	2.0-6.0	<0.50	12.5-14.5
Hastelloy C-276	V <0.35	.	.	<0.02	<2.5	14.5-16.5	.	4.0-7.0	<1.00	15.0-17.0
Hastelloy C-2000	.	<0.50	.	<0.010	<2.0	22.0-24.0	1.3-1.9	<3.00	<0.50	15.0-17.0
Hastelloy F	.	.	.	<0.05	<2.5	21.0-23.0	.	rem	1.0-2.0	5.5-7.5
Hastelloy G	.	.	.	<0.05	<2.5	21.0-23.5	1.5-2.5	18.0-21.0	1.0-2.0	5.5-7.5
Hastelloy G-2	.	.	.	<0.03	.	23.0-26.0	0.7-1.2	rem	<1.00	5.0-7.0
Hastelloy G-3	Nb+Ta <0.50	.	.	<0.015	<5.0	21.0-23.5	1.5-2.5	18.0-21.0	<1.00	6.0-8.0
Hastelloy G-30	.	.	.	<0.03	<5.00	28.0-31.5	1.0-2.4	13.0-17.0	<1.50	4.0-6.0
Hastelloy G-50	.	.	.	<0.015	<2.5	19.0-21.0	<0.50	15.0-20.0	<1.00	8.0-10.0
Hastelloy H-9M	.	.	.	<0.03	<5.0	20.5-23.0	.	17.0-20.0	<1.00	8.0-10.0
Hastelloy N	V <0.50	<0.50	<0.010	0.04-0.08	<0.20	6.0-8.0	<0.35	<5.00	<1.00	15.0-18.0
Hastelloy S	La 0.01-0.10	0.10-0.50	<0.015	<0.02	<2.0	14.5-17.0	<0.35	<3.00	0.30-1.00	14.0-16.5
Hastelloy W	V <0.60	.	.	<0.12	.	4.00-6.00	.	4.0-7.0	<1.00	23.0-26.0
Hastelloy X	.	.	.	0.05-0.15	0.5-2.5	20.5-23.0	.	17.0-20.0	<1.00	8.0-10.0
Haynes 20 Mod	.	.	.	<0.05	.	21.0-23.0	.	.	<2.50	4.0-6.0
Haynes 230	La <0.050	0.20-0.50	<0.003	0.05-0.15	<3.0	20.0-24.0	<0.50	<3.00	0.3-1.0	1.0-3.0
Haynes 242	.	<0.50	<0.006	<0.03	<1.0	7.0-9.0	<0.50	<2.00	<0.80	24.0-26.0
HL	.	.	.	0.20-0.60	.	28.0-32.0	.	rem	<2.00	<0.50
HL-30	.	.	.	0.25-0.35	.	28.0-32.0	.	rem	<1.50	<0.50
HL-40	.	.	.	0.35-0.45	.	28.0-32.0	.	rem	<1.50	<0.50
HP	.	.	.	0.35-0.75	.	24.0-28.0	.	rem	<2.00	<0.50
HR-120	N 0.15-0.30	<0.40	<0.010	0.02-0.1	<3.0	23.0-27.0	<0.50	rem	<1.50	<2.50
HR-160	.	.	.	<0.15	27.0-33.0	26.0-30.0	.	<3.50	<1.50	<1.0
HT	.	.	.	0.35-0.75	.	15.0-19.0	.	rem	<2.00	.
HT-30	.	.	.	0.25-0.35	.	13.0-17.0	.	rem	<2.00	<0.50
INCO 032	.	.	.	<0.03	.	20.0-23.0	.	rem	<1.00	4.0-5.0
Inconle FM62	.	.	.	<0.035	.	14.0-17.0	<0.50	6.0-10.0	<1.00	.
JS 700	Pb <0.005, Sn <0.035	.	.	<0.04	.	19.0-23.0	<0.50	rem	<2.00	4.3-5.0
K500	.	2.30-3.15	.	<0.25	.	.	rem	<2.00	<1.50	.
M220C	Be 1.80-2.30	.	.	0.30-0.50	.	.	.	.	.	.
M252	.	0.75-1.25	0.003-0.01	0.10-0.20	9.0-11.0	18.0-20.0	.	<5.00	<0.50	9.0-10.5
MA754	Y2O3 0.5-0.7	0.20-0.50	.	<0.05	.	19.0-23.0	.	<2.50	.	.
MAR-M-Alloy	Hf 1.50-2.0, Ta 1.25-1.75	5.25-5.75	0.01-0.02	0.13-0.17	9.0-10.0	8.0-10.0	<0.10	<1.00	<0.20	2.25-2.75
MAT21	Ta 1.5-2.2, V <0.35	.	.	<0.015	<1.0	18.0-20.0	<1.00	<0.50	<0.50	18.0-20.0

Type	Nb	Ni	P	S	Si	Ta	Ti	W	Zr
Hastelloy B	.	rem	<0.040	<0.030	<1.00	.	.	.	.
Hastelloy C	.	rem	<0.040	<0.030	<1.00	.	.	3.0-4.5	.
Hastelloy C-4	.	rem	<0.040	<0.030	<0.08	.	<0.70	.	.
Hastelloy C-22	.	rem	<0.020	<0.020	<0.08	.	.	2.5-3.5	.
Hastelloy C-276	.	rem	<0.030	<0.030	<0.08	.	.	3.0-4.5	.
Hastelloy C-2000	.	rem	<0.025	<0.010	<0.08	.	.	.	.
Hastelloy F	1.8-2.5	44.0-47.0	<0.040	<0.010	<1.00	.	<0.03	<1.00	.
Hastelloy G	1.75-2.50	rem	<0.040	<0.030	<1.0	.	.	<1.00	.
Hastelloy G-2	.	47.0-52.0	<0.030	<0.030	<1.00	.	0.7-1.5	.	.
Hastelloy G-3	.	rem	<0.040	<0.030	<1.00	.	.	<1.00	.
Hastelloy G-30	0.3-1.5	rem	<0.040	<0.020	<0.08	.	.	1.5-4.0	.
Hastelloy G-50	<0.50	>50.0	<0.010	<0.015	<1.00	.	.	<1.00	.
Hastelloy H-9M	.	rem	<0.040	<0.030	<1.00	.	.	1.0-2.0	.
Hastelloy N	.	rem	<0.015	<0.020	<1.00	.	.	<0.50	.
Hastelloy S	.	rem	<0.020	<0.015	0.20-0.75	.	.	<1.00	.
Hastelloy W	.	rem	<0.050	<0.050	<1.00	.	.	.	.
Hastelloy X	.	rem	<0.040	<0.030	<1.00	.	.	0.2-1.0	.
Haynes 20 Mod	.	25.0-27.0	<0.040	<0.030	<1.0	.	4\mtC min	.	.
Haynes 230	.	rem	<0.030	<0.015	0.25-0.75	.	.	13.0-15.0	.
Haynes 242	.	rem	<0.030	<0.015	<0.80	.	.	.	.
HL	.	16.0-22.0	<0.040	<0.040	<2.00	.	.	.	.
HL-30	.	18.0-22.0	<0.040	<0.040	0.50-2.00	.	.	.	.
HL-40	.	18.0-22.0	<0.040	<0.040	0.50-2.00	.	.	.	.
HP	.	35.0-37.0	<0.040	<0.040	<2.50	.	.	.	.
HR-120	0.4-0.9	35.0-39.0	<0.040	<0.030	<1.00	.	<0.20	<2.50	.
HR-160	<1.00	rem	<0.030	<0.015	2.4-3.0	.	0.20-0.80	<1.00	.
HT	.	33.0-37.0	<0.040	<0.050	<2.50	.	.	.	.
HT-30	.	33.0-37.0	<0.040	<0.040	<2.50	.	.	.	.
INCO 032	.	30.0-34.0	<0.030	<0.005	<0.05	.	.	.	.
Inconle FM62	1.0-3.0	>72.0	<0.030	<0.015	<0.50	.	.	.	.
JS 700	8*C <0.50	24.0-26.0	<0.040	<0.030	<1.00	.	.	.	.
K500	.	63.0-70.0	<0.010	<0.010	<0.05	.	0.35-0.85	.	.
M220C	.	rem	.	.	.	.	.	.	.
M252	.	rem	<0.015	<0.015	<0.50	.	2.25-2.75	.	.
MA754	.	rem	.	.	.	.	0.3-0.6	.	.
MAR-M-Alloy	.	rem	.	<0.015	<0.20	1.25-1.75	1.25-1.75	9.0-11.0	0.03-0.08
MAT21	.	rem	<0.020	<0.020	<0.08

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Type	Comment	Al	B	C	Co	Cr	Cu	Fe	Hf	Mn
N03260	ThO2 1.80-2.60	.	.	<0.02	<0.20	<0.05	<0.15	<0.05	.	.
N04019	.	.	.	<0.25	.	.	27.0-31.0	<2.50	.	<1.50
N04020	.	<0.50	.	<0.35	.	.	26.0-33.0	<2.50	.	<1.50
N04406	.	<0.10	.	<0.25	.	.	26.0-28.0	<2.00	.	<1.50
N06602	.	.	.	<0.02	.	14.0-17.0	<0.50	6.0-10.0	.	<1.00
N07002	nominal concentrations	0.05	.	0.05	0.50	16.00	.	.	.	2.30
N07013	Other 7.3-7.7	3.20-3.60	0.010-0.020	0.07-0.20	8.50-9.50	12.2-13.0	.	<0.50	0.75-1.05	<0.10
N07048	.	0.40-0.90	.	<0.015	<2.0	20.0-23.5	1.0-2.2	18.0-21.0	.	<0.80
N07626	N <0.05	0.40-0.80	.	<0.05	<1.0	20.0-23.0	<0.50	<6.00	.	<0.50
N07716	.	<0.35	.	<0.03	.	19.0-22.0	.	rem	.	<0.20
N07752	Nb+Ta 0.70-1.20, V <0.10	0.40-1.00	.	0.020-0.060	<0.050	14.5-17.0	<0.50	5.0-9.0	.	<1.00
N07924	Mg <0.005, N <0.02	<0.75	.	<0.020	<3.0	20.5-22.5	1.0-4.0	7.0-13.0	.	<0.20
N08021	Nb+Ta 8\mtc-1.0	.	.	<0.07	.	19.0-21.0	3.0-4.0	rem	.	<2.50
N08022	Nb+Ta 8\mtc-1.0	.	.	<0.025	.	19.0-21.0	3.0-4.0	rem	.	1.5-2.0
N08024	.	.	.	<0.03	.	22.5-25.0	0.5-1.5	rem	.	<1.00
N08221	.	<0.20	.	<0.025	.	20.0-22.0	1.5-3.0	rem	.	<1.00
N08310	N 0.20-0.40	.	.	<0.02	.	24.0-26.0	.	rem	.	2.00-4.00
N08421	.	<0.2	.	<0.025	.	20.0-22.0	1.5-2.0	rem	.	<1.00
N08535	.	.	.	<0.03	.	24.0-27.0	<1.50	rem	.	<1.00
N08826	.	.	.	<0.05	.	19.5-23.5	1.5-3.5	>22.0	.	<1.00
N08904	.	.	.	<0.020	.	19.0-23.0	1.0-2.0	rem	.	<2.00
N08925	N 0.10-0.20	.	.	<0.020	.	19.0-21.0	0.8-1.5	rem	.	<1.00
N08926	N 0.15-0.25	.	.	<0.020	.	19.0-21.0	0.5-1.5	rem	.	<2.00
N09925	.	0.10-0.50	.	<0.03	.	19.5-23.5	1.5-3.0	>22.0	.	<1.00
N13009	Bi <0.5 ppm, Pb <10 ppm	4.75-5.25	0.010-0.020	0.12-0.17	9.00-11.00	8.00-10.00	<0.10	<1.50	.	<0.20
N13010	Bi, Pb <0.5 ppm; Ta 4-5	5.75-6.25	0.010-0.020	0.08-0.13	9.50-10.50	7.50-8.50	.	<0.35	.	<0.20
N13020	Bi <0.5 ppm	3.75-4.75	0.025-0.035	0.03-0.10	17.0-20.0	14.0-16.0	<0.10	<2.00	.	<0.15
N13021	Ag, Bi, Pb limits	4.5-4.9	0.003-0.010	0.12-0.17	18.0-22.0	14.0-15.7	<0.20	<1.00	.	<1.00
N14076	.	.	.	<0.05	<0.50	2.0-3.0	4.0-6.0	rem	.	<1.50
N14080	.	.	.	<0.05	<0.50	<0.30	<0.30	rem	.	<0.80
N19907	.	<0.20	<0.012	<0.06	12.0-16.0	<1.0	<0.50	rem	.	<1.00
N19909	.	<0.15	.	<0.06	12.0-16.0	<1.00	<0.50	rem	.	<1.00
N22000	.	.	.	<0.12	.	<1.0	2.0-4.0	.	.	<1.50
N24025	.	.	.	<0.25	.	.	27.0-33.0	<3.50	.	<1.50
N24030	.	.	.	<0.30	.	.	27.0-33.0	<3.50	.	<1.50
N24130	.	.	.	<0.30	.	.	26.0-33.0	<3.50	.	<1.50
N24135	.	.	.	<0.35	.	.	26.0-33.0	<3.50	.	<1.50
N26022	V <0.35	.	.	<0.02	.	20.0-22.5	.	2.0-6.0	.	<1.00
N26055	Bi, Sn 3.0-5.0	.	.	<0.05	.	11.0-14.0	.	<2.00	.	<1.50
N26455	.	.	.	<0.02	.	15.0-17.5	.	<2.00	.	<1.00
N26625	.	.	.	<0.06	.	20.0-23.0	.	<5.00	.	<1.00
N26641	.	.	1.2-2.0	0.2-0.8	.	10.0-15.0	.	2.0-5.0	.	.
N26985	Nb+Ta <0.5	.	.	<0.02	<5.0	21.5-23.5	1.5-2.5	18.0-21.0	.	<1.00
N28825	.	.	.	<0.05	.	19.5-23.5	1.5-3.0	28.0-32.0	.	<1.00
N30002	V 0.2-0.4	.	.	<0.12	.	15.5-17.5	.	4.5-7.5	.	<1.00
N30007	.	.	.	<0.07	.	<1.0	.	<3.00	.	<1.00
N30012	V 0.2-0.6	.	.	<0.12	.	<1.00	.	4.0-6.0	.	<1.00
N30107	.	.	.	<0.07	.	17.0-20.0	.	<3.00	.	<1.00
N94620	Mg <0.010	<0.01	.	<0.02	25 nom	<0.03	<0.20	rem	.	<0.14
N94630	Mg <0.010	<0.01	.	<0.02	17 nom	<0.03	<0.20	rem	.	<0.35

Type	Mo	Nb	Ni	P	S	Si	Ta	Ti	W	Zr
N03260	.	.	rem	.	<0.0025	.	.	<0.05	.	.
N04019	.	.	>60.0	.	<0.015	3.5-4.5	.	.	.	.
N04020	.	.	rem	.	.	<2.00	.	.	.	.
N04406	.	.	rem	.	.	<0.025	.	.	.	.
N06602	.	.	>72.0	.	<0.015	<0.50	.	.	.	.
N07002	.	.	rem	.	.	0.05	.	3.10	.	.
N07013	1.70-2.10	<0.10	rem	<0.015	<0.015	<0.10	3.85-4.5	3.85-4.15	3.85-4.50	0.05-0.15
N07048	5.0-7.0	<0.05	rem	<0.020	<0.010	<0.10	.	1.5-2.1	.	.
N07626	8.0-10.0	4.50-5.50	rem	<0.020	<0.015	<0.50	.	<0.60	.	.
N07716	7.0-9.5	2.75-4.00	57.0-63.0	<0.015	<0.010	<0.20	.	1.0-1.6	.	.
N07752	.	.	>70.0	<0.008	<0.003	<0.50	.	2.25-2.75	.	<0.05
N07924	5.50-7.00	2.75-3.50	>52.0	<0.030	<0.005	<0.20	.	1.0-2.0	<0.50	.
N08021	2.0-3.0	.	32.0-36.0	<0.030	<0.030	<0.60	.	.	.	.
N08022	2.0-3.0	.	32.0-36.0	<0.015	<0.020	<0.15	.	.	.	.
N08024	3.50-5.00	0.15-0.35	35.0-40.0	<0.035	<0.035	<0.50	.	.	.	.
N08221	5.00-6.50	.	36.0-46.0	.	<0.030	<0.50	.	0.6-1.0	.	.
N08310	2.00-4.00	.	18.0-22.0	<0.035	<0.015	<0.05	.	.	.	.
N08421	5.0-6.5	.	39.0-41.0	<0.030	<0.030	<0.50	.	0.6-1.0	.	.
N08535	2.5-4.0	.	29.0-36.5	<0.030	<0.030	<0.50	.	.	.	.
N08826	2.5-3.5	0.6-1.2	38.0-44.0	<0.030	<0.030	<1.00	.	.	.	.
N08904	4.00-5.00	.	23.0-28.0	<0.045	<0.035	<1.00	.	.	.	.
N08925	6.0-7.0	.	24.0-26.0	<0.045	<0.030	<0.50	.	.	.	.
N08926	6.0-7.0	.	24.0-26.0	<0.030	<0.010	<0.50	.	.	.	.
N09925	2.50-3.50	<0.50	38.0-46.0	<0.030	<0.030	<0.50	.	1.9-2.4	.	.
N13009	.	0.75-1.25	rem	.	<0.015	<0.20	.	1.75-2.25	11.5-13.5	0.03-0.08
N13010	5.75-6.25	.	rem	<0.015	<0.015	<0.25	.	0.8-1.2	<0.10	0.05-0.10
N13020	4.50-5.50	.	rem	.	<0.005	<0.05	.	2.75-3.75	.	<0.06
N13021	4.5-5.5	.	rem	.	<0.015	<1.0	.	0.9-1.5	.	.
N14076	<0.50	.	75.0-78.0	<0.020	<0.010	<0.50	.	.	.	.
N14080	3.5-6.0	.	79.0-82.0	<0.020	<0.010	<0.50	.	.	.	.
N19907	.	4.3-5.2	35.0-40.0	<0.015	<0.015	<0.35	.	1.2-1.8	.	.
N19909	.	4.3-5.2	35.0-40.0	<0.015	<0.015	0.25-0.50	.	1.3-1.8	.	.
N22000	.	.	rem	<0.030	<0.030	8.5-10.0	.	.	.	.
N24025	.	.	rem	<0.030	<0.030	3.5-4.5	.	.	.	.
N24030	.	.	rem	<0.030	<0.030	2.7-3.7	.	.	.	.
N24130	.	1.0-3.0	rem	<0.030	<0.030	1.0-2.0	.	.	.	.
N24135	.	<0.50	rem	<0.030	<0.030	<1.25	.	.	.	.
N26022	12.5-14.5	.	rem	<0.025	<0.025	<0.80	.	.	2.5-3.5	.
N26055	2.0-3.5	.	rem	<0.030	<0.030	<0.50	.	.	.	.
N26455	15.0-17.5	.	rem	<0.030	<0.030	<0.80	.	.	<1.00	.
N26625	8.0-10.0	3.15-4.50	rem	<0.015	<0.015	<1.00	.	.	.	.
N26641	.	.	rem	.	.	1.2-5.0	.	.	.	.
N26985	6.0-8.0	.	rem	<0.025	<0.030	<1.00	.	<1.50	.	.
N28825	2.5-3.5	0.7-1.0	rem	<0.030	<0.030	0.75-1.20	.	.	.	.
N30002	16.0-18.0	.	rem	<0.040	<0.030	<1.00	.	.	3.75-5.25	.
N30007	30.0-33.0	.	rem	<0.040	<0.030	<1.00	.	.	.	.
N30012	26.0-30.0	.	rem	<0.040	<0.030	<1.00	.	.	.	.
N30107	17.0-20.0	.	rem	<0.040	<0.030	<1.00	.	.	.	.
N94620	<0.06	.	27 nom	<0.006	<0.006	<0.15	.	<0.01	.	<0.01
N94630	<0.06	.	29 nom	<0.006	<0.006	<0.15	.	<0.01	.	<0.01

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Type	Comment	Al	B	C	Co	Cr	Cu	Fe	Mn
Ni-20 Cr +Nb		.	.	<0.15	.	19.0-21.0	.	<1.00	<2.50
NiC 52		.	.	<0.03	.	23.0-27.0	0.5-1.0	rem	<1.00
NiC42M		.	.	<0.03	.	20.0-23.0	1.5-3.0	rem	<1.00
Nichrome		.	.	<0.15	.	14.0-18.0	.	rem	<1.00
Nichrome V		.	.	<0.15	.	19.0-21.0	.	<1.00	<2.50
Nicofer 45	N 0.15-0.12, rare earths	.	.	0.05-0.12	.	26.0-29.0	<0.30	21.0-25.0	<1.00
Nicofer 6219Si		<0.50	.	<0.05	<1.0	18.0-22.0	<0.50	2.0-4.0	<0.50
Ni-Cr 30		<0.20	.	<0.15	.	29.0-31.0	.	<1.00	<0.10
Nicofer 5020hMo	N 0.05-0.20, Other <0.50	0.50-0.50	.	<0.03	.	18.0-21.0	.	12.0-16.0	<0.50
Nicofer 6025 HT	Y 0.05-0.12	1.8-2.4	.	0.15-0.25	.	24.0-26.0	<0.10	8.0-11.0	<0.15
Ni-Cu		.	.	<0.04	.	.	28.0-34.0	<2.50	<2.00
Nimonic 263	Al+Ti 2.4-2.8	0.30-0.60	.	0.04-0.08	19.0-21.0	19.0-21.0	<0.20	<0.70	<0.60
Nimonic 75		.	.	0.08-0.15	.	18.0-21.0	<0.50	<5.00	<1.00
Nimonic 80A		1.0-1.8	<0.008	<0.10	<2.0	18.0-21.0	<0.20	<3.00	<1.00
Nimonic 90		0.8-2.0	.	<0.13	15.0-21.0	18.0-21.0	.	<3.00	<1.00
Ni-Span-C 902		0.30-0.80	.	<0.06	.	4.90-5.75	.	rem	<0.80
Nitiono 55	H <0.005, O <0.05	.	.	<0.07	<0.05	<0.01	<0.01	<0.05	.
PH3	Mo+0.5W = 2.5-5.5	<2.00	.	<0.03	.	18.0-27.0	.	rem	<1.00
PH6		<2.00	.	<0.03	.	12.0-22.0	.	rem	<1.00
PH7		<0.35	.	<0.03	.	14.0-19.0	.	rem	<1.00
Pyromet 31		1.00-1.70	0.003-0.007	0.03-0.06	.	22.0-23.0	.	rem	<0.20
Pyromet 31V		1.15-1.40	.	0.03-0.06	<1.0	22.3-22.9	.	rem	.
R405		.	.	<0.30	.	.	rem	<2.50	<2.00
RA 330	Pb <0.005, Sn <0.025	.	.	<0.08	.	17.0-20.0	<1.00	rem	<2.00
RA 330-04		.	.	0.18-0.29	.	17.0-20.0	<0.50	rem	4.25-6.5
RA 330TX	Pb <0.005, Sn <0.025	0.10-0.50	.	0.05-0.10	.	17.0-20.0	<1.00	rem	<2.00
RA 333	Pb <0.025, Sn <0.025	.	.	<0.08	2.5-4.0	24.0-27.0	<0.50	rem	<2.00
Rene 41		1.40-1.80	0.003-0.010	<0.12	10.0-12.0	18.0-20.0	.	<5.00	<0.10
Sanicro 28		.	.	<0.03	.	26.0-28.0	0.6-1.4	rem	<2.50
SM2035		.	.	<0.03	.	20.5-23.5	<0.70	rem	<1.00
SM2050		.	.	<0.02	.	20.0-23.0	0.25-1.25	rem	<1.00
SM2060Mo		.	.	<0.03	.	19.0-22.0	0.25-1.25	rem	<1.50
SM2550		.	.	<0.03	.	23.0-26.0	<1.20	rem	<1.00
Udimet 500		2.05-3.25	0.003-0.01	<0.15	13.00-20.00	15.0-20.0	<0.15	<4.00	<0.75
Waspaloy		1.20-1.60	0.003-0.01	0.03-0.10	12.00-15.00	18.0-21.0	<0.50	<2.00	<1.00
W-Ni-3		.	.	<0.15	.	.	<0.25	<0.60	<0.35
W-NiAl-1		4.0-6.0	.	.	.	.	.	.	.
W-NiAl-2	Other <1.00	17.0-27.0	.	.	.	.	.	.	.
W-NiCrFe-2		.	.	<0.10	.	14.0-7.0	<0.50	6.0-10.0	<1.00
W-NiCrMo	Other 3.0-4.0+Z86	.	.	.	.	21.0-23.0	.	1.0-2.0	.
W-NiCrTi		.	.	.	.	44-46	.	.	.
X750		0.40-1.00	.	<0.08	.	14.0-17.0	<0.50	5.0-9.0	<1.00
X782	nominal concentrations	.	.	2.00	0.50	26.00	.	4.00	0.30

Type	Mo	Nb	Ni	P	S	Si	Ti	W	Zr
Ni-20 Cr +Nb	.	0.75-1.50	rem	.	<0.010	0.75-1.60	.	.	.
NiC 52	6.0-8.0	.	48.0-56.0	<0.030	<0.003	.	0.6-1.5	.	.
NiC42M	5.0-4.0	.	40.0-44.0	<0.030	<0.003	<0.50	0.6-1.2	.	.
Nichrome	.	.	>57.0	.	<0.010	0.75-1.60	.	.	.
Nichrome V	.	.	rem	.	<0.010	0.75-1.60	.	.	.
Nicofer 45	.	.	>45.0	<0.020	<0.010	2.5-3.0	.	.	.
Nicofer 6219Si	7.0-9.0	.	rem	<0.020	<0.010	0.70-1.10	<0.50	.	.
Ni-Cr 30	.	.	rem	<0.030	<0.010	0.75-1.60	.	.	.
Nicofer 5020hMo	9.5-12.5	0.05-0.60	rem	<0.020	<0.010	<0.50	.	0.05-2.5	.
Nicofer 6025 HT	.	.	rem	<0.020	<0.010	<0.50	0.1-0.2	.	0.01-0.10
Ni-Cu	.	.	>63.0	.	<0.025	<0.50	.	.	.
Nimonic 263	5.6-6.1	.	rem	<0.015	<0.007	<0.40	1.9-2.4	.	.
Nimonic 75	.	.	rem	.	.	<1.00	0.20-0.60	.	.
Nimonic 80A	.	.	rem	<0.045	<0.015	<1.00	1.8-2.7	.	.
Nimonic 90	.	.	rem	.	.	<1.50	1.8-3.0	.	.
Ni-Span-C 902	.	.	41.0-43.5	<0.040	<0.040	<1.0	2.20-2.75	.	.
Nitiono 55	.	<0.025	54.0-57.0	.	.	.	rem	.	.
PH3	2.5-5.5	2.5-6.0	45.0-60.0	<0.030	<0.010	<0.50	<2.00	<0.50	.
PH6	9.0-15.0	4.0-6.0	50.0-60.0	<0.030	<0.010	<0.50	<1.00	0.5-2.5	.
PH7	2.5-5.5	<0.10	34.0-42.0	<0.030	<0.010	<0.50	.	2.0-3.0	.
Pyromet 31	1.70-2.30	0.6-1.2	55.0-58.0	<0.015	<0.015	<0.20	2.10-2.60	.	.
Pyromet 31V	1.70-2.30	0.75-0.95	55.0-58.0	<0.015	<0.015	<0.20	2.10-2.40	.	.
R405	.	.	63.0-70.0	.	0.025-0.060	<0.50	.	.	.
RA 330	.	.	34.0-37.0	<0.030	<0.030	0.75-1.50	.	.	.
RA 330-04	<0.70	.	33.0-37.0	<0.025	<0.020	0.65-1.30	.	.	.
RA 330TX	.	.	34.0-37.0	<0.030	<0.030	0.75-1.50	0.20-0.60	.	.
RA 333	2.50-4.00	.	44.0-47.0	<0.030	<0.030	0.75-1.50	.	2.5-4.0	.
Rene 41	9.0-10.5	.	rem	.	<0.015	<0.50	3.0-3.3	.	.
Sanicro 28	3.0-4.0	.	30.0-34.0	<0.030	<0.030	<1.00	.	.	.
SM2035	4.0-5.0	.	33.0-38.0	<0.030	<0.030	<0.75	.	0.2-0.8	.
SM2050	10.1-12.0	.	50.0-54.0	<0.030	<0.005	<0.09	.	0.25-1.25	.
SM2060Mo	12.0-14.0	0.50-1.25	54.0-60.0	<0.030	<0.005	<0.50	.	0.25-1.25	.
SM2550	6.0-9.0	.	47.0-52.0	<0.030	<0.030	<1.00	<0.69	<3.00	.
Udimet 500	3.0-5.0	.	rem	<0.015	<0.015	<0.75	2.50-3.25	.	.
Waspaloy	3.50-5.00	.	rem	<0.030	<0.030	<0.75	2.75-3.25	.	0.02-0.12
W-Ni-3	.	.	>97.0	.	<0.040	<0.50	.	.	.
W-NiAl-1	.	.	rem	.	.	.	.	.	.
W-NiAl-2	.	.	rem	.	.	.	.	.	.
W-NiCrFe-2	.	.	>72.0	.	<0.020	<0.50	.	.	.
W-NiCrMo	9.0-11.0	.	rem
W-NiCrTi	.	.	rem	.	.	.	3.0-4.0	.	.
X750	.	0.7-1.2	>70.0	.	<0.010	<0.50	2.25-2.75	.	.
X782	.	.	rem	.	.	0.30	.	8.75	.

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