Reference materials 2017

Cast Iron

Fe

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ISO Guide 34

Cast Iron

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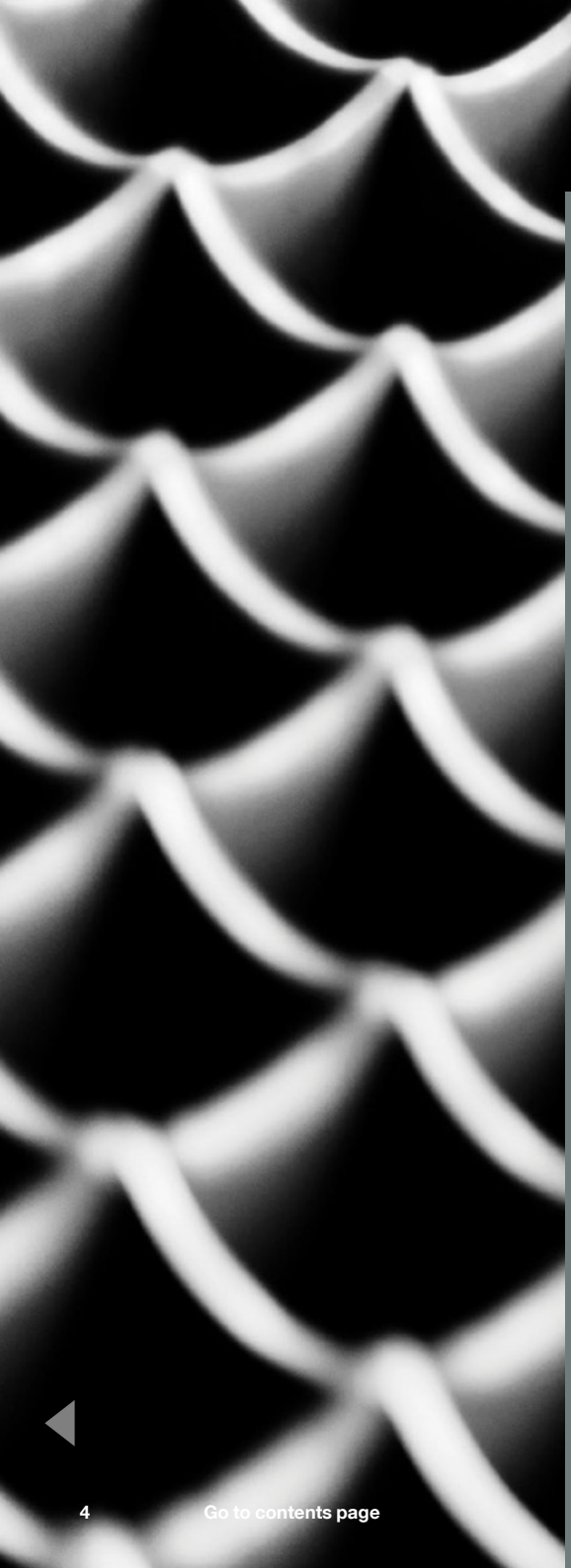

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SPL 02033 - CKD Replacement

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	As	B
SPL-CZ02033-1C	Cast Iron (unalloyed ductile iron)	3.15	2.36	0.674	0.064	0.01	0.051	0.367	0.197	0.035	0.033	0.009	0.019		0.0005
SPL-CZ02033-1E	Cast Iron (unalloyed ductile iron)	3.15	2.72	0.718	0.037	0.006	0.037	0.367	0.185	0.012	0.058	0.027	0.044		0.0036
SPL-CZ02033-1F	Cast Iron (unalloyed ductile iron)	3.23	2.68	0.693	0.043	0.005	0.035	0.373	0.182	0.018	0.073	0.036	0.07		0.0043
SPL-CZ02033-1G	Cast Iron (unalloyed ductile iron)	3.22	2.53	0.701	0.036	0.007	0.044	0.357	0.185	0.027	0.062	0.023	0.05		0.0034
SPL-CZ02033-2E	Cast Iron (Ni-Cu ductile iron)	3.47	1.03	0.168	0.106	0.01	0.043	0.62	(0.002)	0.89	0.025	0.017	0.038		0.0024
SPL-CZ02033-2F	Cast Iron (Ni-Cu ductile iron)	3.77	1.23	0.091	0.159	0.009	0.022	0.658	(0.002)	0.89	0.024	0.018	0.053		0.002
SPL-CZ02033-2G	Cast Iron (Ni-Cu ductile iron)	3.78	1.1	0.096	0.125	0.009	0.027	0.65	(0.002)	0.88	0.019	0.013	0.036		0.0023
SPL-CZ02033-3C	Cast Iron (vermicular iron, CGI)	3.68	2.15	0.333	0.026	0.007	0.1	0.04	0.49	0.421	0.024	0.013	0.006	(0.007)	0.0044
SPL-CZ02033-3D	Cast Iron (vermicular iron, CGI)	3.24	2.12	0.317	0.008	0.006	0.236	0.025	0.453	0.396	0.055	0.006	0.016	(0.018)	0.0071
SPL-CZ02033-4B	Cast Iron (pig iron)	3.95	0.252	0.145	0.041	0.046	0.049	0.023	0.005	0.062	0.003				
SPL-CZ02033-4C	Cast Iron (pig iron)	4.06	0.423	0.25	0.054	0.038	0.08	0.084	0.002	0.085	0.005				
SPL-CZ02033-4D	Cast Iron (pig iron)	4.19	0.259	0.112	0.05	0.041	0.056	0.063	0.024	0.084	0.007			(0.012)	(0.0001)
SPL-CZ02033-4E	Cast Iron (pig iron)	4.45	0.09	0.034	0.023	0.006	0.03	0.049	0.002	0.005	(0.003)				
SPL-CZ02033-5A	Cast Iron (malleable iron)	2.3	1.26	0.804	0.035	0.1	0.054	0.096	0.1	0.014	0.06				
SPL-CZ02033-5B	Cast Iron (malleable iron)	2.42	1.32	0.812	0.033	0.073	0.061	0.188	0.089	0.031	0.062				0.014
SPL-CZ02033-5C	Cast Iron (malleable iron)	2.3	1.4	0.704	0.027	0.091	0.085	0.188	0.104	0.013	0.103				0.0078

Analyte - Measured Values (continued)

Code	Bi	Co	Pb	Sb	Sn	Te	Ti	V	W	Zn	Zr		Size	Type
SPL-CZ02033-1C	0.016		0.006		0.032		0.036	0.019	0.015	0.001			Ø 40x18 mm	CRM
SPL-CZ02033-1E	(0.002)	0.022	0.007		0.032		0.046	0.015	0.021	0.009	(0.007)		Ø 40x18 mm	CRM
SPL-CZ02033-1F	(0.001)	0.024	0.009		0.03	(0.007)	0.041	0.014	0.022	(0.004)	(0.008)		Ø 40x18 mm	CRM
SPL-CZ02033-1G	0.005	0.01	0.016		0.028		0.054	0.019	0.015	(0.003)	(0.004)		Ø 40x18 mm	CRM
SPL-CZ02033-2E	0.005	0.005	(0.004)	0.028	0.015	(0.006)	0.039	0.026	0.008	0.025			Ø 40x18 mm	CRM
SPL-CZ02033-2F	(0.002)	(0.003)	0.005	0.028	0.014		0.021	0.01	(0.003)	0.018	(0.005)		Ø 40x18 mm	CRM
SPL-CZ02033-2G	0.006	0.012	0.008	0.029	0.015	(0.004)	0.029	0.017	(0.004)	0.02			Ø 40x18 mm	CRM
SPL-CZ02033-3C	(0.002)	0.026	0.005		0.009	(0.005)	0.021	0.016	(0.003)				Ø 40x18 mm	CRM
SPL-CZ02033-3D	(0.002)	0.014	0.005	0.007	0.009		0.016	0.072					Ø 40x18 mm	CRM
SPL-CZ02033-4B		0.005	0.004	(0.001)	0.001		0.006	0.004		0.008			Ø 40x18 mm	CRM
SPL-CZ02033-4C		0.035	0.003	(0.001)	0.002		0.01	0.015		0.016			Ø 40x18 mm	CRM
SPL-CZ02033-4D	(0.002)	(0.003)	0.007		(0.001)		0.009	0.012		0.009			Ø 40x18 mm	CRM
SPL-CZ02033-4E	(0.002)	0.033	(0.002)		(0.001)		0.011	0.015					Ø 40x18 mm	CRM
SPL-CZ02033-5A							0.008	0.005					Ø 40x18 mm	CRM
SPL-CZ02033-5B	0.02						0.007	0.005					Ø 40x18 mm	CRM
SPL-CZ02033-5C	0.007	0.013		(0.002)	(0.002)	(0.01)	0.008	0.054			(0.009)		Ø 40x18 mm	CRM

Two certified layers extending 6mm upwards from either working surface.

Values listed in mass %: ( ) Uncertified Value

C=Cast, CC=Chill Cast, CCC=Continuous Chill Cast, CW=Concast/Wrought, W=Wrought, SC=Single Cast, HIP=Hot Isostatically-pressed Powder

For more information and to order these products, visit lgcstandards.com

SPL 02033 - CKD Replacement

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	As	B
SPL-CZ02033-6A	Cast Iron (Mn-Cr-V alloyed iron)	3.14	3.37	1.22	0.077	0.032	1.4	0.023	0.005	0.225	0.022				
SPL-CZ02033-6B	Cast Iron (Mn-Cr-V alloyed iron)	2.95	3.23	1.15	0.095	0.02	1.36	0.026	0.005	0.272	0.007				
SPL-CZ02033-6C	Cast Iron (Mn-Cr-V alloyed iron)	3.11	3.25	1.25	0.097	0.019	1.33	0.021	0.006	0.273	0.024				0.0024
SPL-CZ02033-7A	Cast Iron (Ni-Mo alloyed iron)	3.11	1.83	0.321	0.043	0.019	0.479	1.29	1.07	0.022	0.029				
SPL-CZ02033-7B	Cast Iron (Ni-Mo alloyed iron)	3.61	1.82	0.304	0.021	0.02	0.536	1.28	0.96	0.036	0.022				
SPL-CZ02033-7C	Cast Iron (Ni-Mo alloyed iron)	3.55	1.73	0.389	0.028	0.026	0.542	1.26	0.966	0.016	0.04				0.0008
SPL-CZ02033-8B	Cast Iron (plain grey iron)	3.28	1.96	0.461	0.22	0.073	0.111	0.097	0.036	0.154	0.004				
SPL-CZ02033-8C	Cast Iron (plain grey iron)	3.41	1.93	0.408	0.168	0.058	0.125	0.102	0.041	0.158	0.004			(0.006)	

Analyte - Measured Values (continued)

Code	Bi	Co	Pb	Sb	Sn	Te	Ti	V	W	Zn	Zr		Size	Type
SPL-CZ02033-6A				0.056	0.119		0.066	0.3					Ø 40x18 mm	CRM
SPL-CZ02033-6B				0.049	0.14		0.068	0.083					Ø 40x18 mm	CRM
SPL-CZ02033-6C		0.005	(0.003)	0.044	0.131		0.107	0.192	0.007				Ø 40x18 mm	CRM
SPL-CZ02033-7A		0.044					0.027	0.005	0.022				Ø 40x18 mm	CRM
SPL-CZ02033-7B		0.05					0.015	0.007	0.045				Ø 40x18 mm	CRM
SPL-CZ02033-7C	(0.002)	0.048			(0.004)	(0.006)	0.026	0.067	0.037				Ø 40x18 mm	CRM
SPL-CZ02033-8B	0.013		0.006	0.018	0.056		0.025	0.029	0.009				Ø 40x18 mm	CRM
SPL-CZ02033-8C	0.009	0.03	0.008	0.014	0.067		0.022	0.015					Ø 40x18 mm	CRM

Two certified layers extending 6mm upwards from either working surface.

Values listed in mass %: ( ) Uncertified Value

C=Cast, CC=Chill Cast, CCC=Continuous Chill Cast, CW=Concast/Wrought, W=Wrought, SC=Single Cast, HIP=Hot Isostatically-pressed Powder

SPL 20034 series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	As	B
SPL-CZ20034-11A	Cast iron	2.37	3.31	0.343	0.271	0.163	1.219	0.084	1.13	0.086	0.046			0.005	0.0018
SPL-CZ20034-11B	Cast iron	2.44	3.67	0.382	0.271	0.14	1.178	0.082	1.144	0.13	0.067			0.005	0.0032
SPL-CZ20034-12A	Cast iron	2.82	2.57	0.996	0.48	0.073	0.64	0.174	0.114	0.16	0.077			0.022	0.036
SPL-CZ20034-12B	Cast iron	2.92	2.96	1.047	0.484	0.077	0.638	0.174	0.117	0.223	0.077			0.024	0.047
SPL-CZ20034-13A	Cast iron	3.13	2.19	0.691	0.0244	0.0046	0.122	1.266	0.364	0.021	0.017	0.011	0.053	(0.002)	
SPL-CZ20034-13B	Cast iron	3.12	2.12	0.692	0.0243	0.0041	0.125	1.313	0.364	0.021	0.019	0.011	0.054	(0.002)	
SPL-CZ20034-13C	Cast iron	3.15	2.23	0.704	0.0261	0.044	0.124	1.299	0.36	0.089	0.022	0.011	0.064	(0.002)	
SPL-CZ20034-14A	Cast iron	3.29	2.25	0.218	0.0115	0.0103	0.042	0.021	0.633	0.578	0.009	0.009	0.015	0.036	0.0096
SPL-CZ20034-14C	Cast iron	3.14	2.49	0.275	0.0162	0.0081	0.045	0.03	0.646	0.585	0.007	0.019	0.017	0.035	0.0123
SPL-CZ20034-14B	Cast iron	3.26	2.34	0.24	0.0115	0.0096	0.042	0.02	0.635	0.64	0.012	0.012	0.015	0.034	0.01
SPL-CZ20034-15A	Cast iron	3.54	1.68	0.051	0.054	0.0029	0.07	0.661	0.005	1.322	0.026	0.026	0.031	(0.003)	0.0041
SPL-CZ20034-15B	Cast iron	3.52	1.66	0.048	0.054	0.0031	0.067	0.681	0.004	1.322	0.029	0.021	0.037	(0.003)	0.0033
SPL-CZ20034-15C	Cast iron	3.47	1.68	0.06	0.054	0.0028	0.078	0.728	(0.002)	1.123	0.01	0.03	0.04	(0.003)	0.0057

Analyte - Measured Values (continued)

Code	Bi	Co	Pb	Sb	Sn	Ti	V	W	Zn	Zr		Size	Type
SPL-CZ20034-11A	0.011	0.005	0.017	0.013	0.07	0.028	0.184	(0.005)		0.007		Ø 40x18 mm	CRM
SPL-CZ20034-11B	0.007	0.005	0.007	0.011	0.074	0.041	0.182	(0.005)		0.007		Ø 40x18 mm	CRM
SPL-CZ20034-12A	0.005	0.004	0.007	0.046	0.041	0.085	0.34	0.011	(0.003)	(0.002)		Ø 40x18 mm	CRM
SPL-CZ20034-12B	0.006	0.008	0.009	0.046	0.042	0.071	0.326	0.007	0.004	(0.002)		Ø 40x18 mm	CRM
SPL-CZ20034-13A		0.024		(0.002)	0.014	0.014	0.048	(0.003)		0.029		Ø 40x18 mm	CRM
SPL-CZ20034-13B		0.024		(0.002)	0.014	0.012	0.048	(0.003)		0.023		Ø 40x18 mm	CRM
SPL-CZ20034-13C		0.024		(0.002)	0.014	0.015	0.043	(0.003)		(0.02)		Ø 40x18 mm	CRM
SPL-CZ20034-14A	0.007	0.005	(0.005)	0.015	0.027	0.018	0.013	(0.005)	0.01	0.011		Ø 40x18 mm	CRM
SPL-CZ20034-14C		0.009		0.02	0.025	0.018	0.013	(0.003)	0.01	0.013		Ø 40x18 mm	CRM
SPL-CZ20034-14B	0.007	0.005	(0.005)	0.016	0.028	0.021	0.012	(0.005)	0.009	0.014		Ø 40x18 mm	CRM
SPL-CZ20034-15A	0.012	0.027		0.058	0.005	0.034	0.014	0.006				Ø 40x18 mm	CRM
SPL-CZ20034-15B	0.01	0.027		0.058	0.005	0.025	0.013	0.007				Ø 40x18 mm	CRM
SPL-CZ20034-15C	0.008	0.026		0.056	0.006	0.036	0.019	0.004				Ø 40x18 mm	CRM

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SPL 20034 series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	As	B
SPL-CZ20034-16A	Cast iron	3.8	1.0	1.292	0.171	0.0266	0.374	0.39	0.203	0.332	0.007			0.005	0.018
SPL-CZ20034-16B	Cast iron	3.78	1.0	1.327	0.17	0.0236	0.378	0.388	0.202	0.332	0.007			0.005	0.018
SPL-CZ20034-16C	Cast iron	3.87	0.95	1.311	0.173	0.0243	0.332	0.376	0.195	0.345	0.004			(0.003)	0.02
SPL-CZ20034-17A	Cast iron	4.3	0.17	0.494	0.115	0.0034	0.2	2.38	0.03	0.082	(0.002)	(0.003)	0.007	0.007	(0.0002)
SPL-CZ20034-17B	Cast iron	4.38	0.178	0.501	0.089	0.004	0.2	2.34	0.03	0.111	(0.002)	(0.003)	0.009	0.008	(0.0002)
SPL-CZ20034-17C	Cast iron	4.08	0.15	0.503	0.104	0.0033	0.178	2.32	0.03	0.037	(0.002)	(0.003)	0.007	0.0005	(0.0006)

Analyte - Measured Values (continued)

Code	Bi	Co	Pb	Sb	Sn	Ti	V	W	Zn	Zr		Size	Type
SPL-CZ20034-16A		0.01	0.006	0.011	0.125	0.0763	0.021	0.019	0.019	(0.002)		Ø 40x18 mm	CRM
SPL-CZ20034-16B		0.01	0.007	0.011	0.121	0.07	0.029	0.019	0.02	(0.002)		Ø 40x18 mm	CRM
SPL-CZ20034-16C		0.006	0.015	0.01	0.125	0.057	0.027	0.015	0.017	(0.002)		Ø 40x18 mm	CRM
SPL-CZ20034-17A	(0.001)	0.043	(0.002)		(0.002)	0.016	0.086	0.004				Ø 40x18 mm	CRM
SPL-CZ20034-17B	(0.001)	0.043	(0.002)		(0.002)	0.016	0.086	0.004				Ø 40x18 mm	CRM
SPL-CZ20034-17C	(0.002)	0.043	(0.002)		(0.002)	0.015	0.076	0.004				Ø 40x18 mm	CRM

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CKD - Last Units

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	As	B
CKD-242A	Cast Iron, complex alloyed	1.84	3.06	0.06	0.039	0.036	0.029	0.039	1.13	0.055	0.036			0.015	0.008
CKD-245B	Cast Iron, complex alloyed	2.95	1.59	1.38	0.42	0.035	0.197	0.194	0.115	0.081	0.038		0.003	0.006	0.003
CKD-246B	Cast Iron, complex alloyed	2.73	0.76	0.354	0.66	0.02	1.16	0.065	0.009	1.39	0.101	0.007	0.016	0.003	
CKD-247B	Cast Iron, complex alloyed	3.09	1.2	1.05	0.098	0.0034	0.041	0.437	0.023	0.822	0.043	0.053	0.056	0.01	
CKD-249A-L	Cast Iron, 37mm x 37mm x >16mm	4.1	0.91	0.197	0.26	0.013	0.083	1.2	0.01	0.497	0.047	0.027	0.067	0.014	0.015

Analyte - Measured Values (continued)

Code	Bi	Co	Fe	La	Nb	Pb	Sb	Se	Sn	Te	Ti	V	W	Zn	Zr	Size	Type
CKD-242A	(0.015)	0.002	(92.9)		0.013	(0.012)	0.007		0.01	(0.08)	0.19	0.37	(0.007)			38x38x23 mm	CRM
CKD-245B	0.009	0.007	(92.5)		0.029	0.02	0.052	(0.029)	0.076	(0.017)	0.11	0.055	0.02		0.004	38x38x23 mm	CRM
CKD-246B	(0.001)	0.012	(92.6)	0.003	(0.001)	(0.002)	0.004		0.002		0.014	0.013	(0.011)			38x38x23 mm	CRM
CKD-247B	0.007	0.095	[92.7]	0.019	0.052	(0.002)	0.005		0.038	(0.008)	0.067	0.013	(0.002)	0.012	0.009	38x38x23 mm	CRM
CKD-249A-L	0.007	0.02	(92.3)	0.007	0.021	0.015	(0.002)	(0.005)	0.003		0.084	0.032	(0.01)	0.004	0.028	37mm x 37mm x >16mm	CRM

Values listed in mass %: ( ) Uncertified Value

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Popular Cast Irons from BAS

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr		Size	Type
BAS - Malleable Irons										
BAS-SCRM 652/4	Malleable Irons	2.34	0.878	1.19	0.071	0.129	1.0		48x42x12 mm	CRM
BAS-SCRM 655/4	Malleable Irons	1.9	2.11	0.44	0.18	0.076	1.0		48x42x12 mm	CRM

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr		Size	Type
BAS - Low Phosphorous Engineering Irons										
BAS-SCRM 656/8	Low Phosphorus Engineering Irons	2.61	2.59	0.823	0.062	0.107	1.0		48x42x12 mm	CRM
BAS-SCRM 657/8	Low Phosphorus Engineering Irons	2.93	3.02	0.062	0.1	0.024	1.0		48x42x12 mm	CRM
BAS-SCRM 658/11	Low Phosphorus Engineering Irons	3.278	1.933	0.502	0.177	0.067			48x42x12 mm	CRM
BAS-SCRM 659-9	Low Phosphorous Engineering Iron	4.174	1.361	1.01	0.0215	0.0372			48x42x12 mm	CRM
BAS-SCRM 660/10	Low Phosphorus Engineering Irons	3.522	1.719	0.398	0.143	0.1089			48x42x12 mm	CRM

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr		Size	Type
BAS - High Phosphorous Engineering Irons										
BAS-SCRM 661/4	High Phosphorus Engineering Irons	2.56	2.96	0.3	0.84	0.068	1.0		48x42x12 mm	CRM
BAS-SCRM 662/4	High Phosphorus Engineering Irons	2.95	2.33	0.76	0.3	0.087	1.0		48x42x12 mm	CRM
BAS-SCRM 664/4	High Phosphorus Engineering Irons	2.84	2.71	0.57	0.44	0.112	1.0		48x42x12 mm	CRM
BAS-SCRM 665/4	High Phosphorus Engineering Irons	3.25	1.66	0.24	1.09	0.053	1.0		48x42x12 mm	CRM

Analyte - Measured Values

Code	Description	C	Si	Mn	Cr	Ni	Mo	Cu	Ce	Mg	Ti	V	Size	Type
BAS - Ductile (Nodular) Irons														
BAS-SCRM 666/12	Ductile (Nodular) Irons	3.599	1.763	0.106	0.102	1.709	0.0979	0.0581		0.0838	0.1069	0.0486	48x42x12 mm	CRM
BAS-SCRM 667-13	Ductile (Nodular) Irons	3.04	2.866	0.222	0.294	1.303	0.006	0.497	0.11	0.07	0.007	0.103	48x42x12 mm	CRM
BAS-SCRM 668/13	Ductile (Nodular) Irons	3.724	1.4	0.712	0.962	0.097	0.0193	0.751	0.0245	0.0116	0.091	0.193	48x42x12 mm	CRM
BAS-SCRM 669/14	Ductile (Nodular) Iron	2.955	2.201	0.526	0.214	0.473	0.055	0.194	0.0415	0.0224	0.0499	0.532	48x42x12 mm	CRM
BAS-SCRM 670/18	Ductile (Nodular) Irons	3.61	2.166	0.341	0.488	0.889	0.0131	0.969	0.0113	0.0465	0.102	0.0229	48x42x12 mm	CRM

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SPL Pig Irons

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	As	B	Bi	Co
SPL-CZ02033-4B	Cast Iron (pig iron)	3.95	0.252	0.145	0.041	0.046	0.049	0.023	0.005	0.062	0.003				0.005
SPL-CZ02033-4C	Cast Iron (pig iron)	4.06	0.423	0.25	0.054	0.038	0.08	0.084	0.002	0.085	0.005				0.035
SPL-CZ02033-4D	Cast Iron (pig iron)	4.19	0.259	0.112	0.05	0.041	0.056	0.063	0.024	0.084	0.007	(0.012)	(0.0001)	(0.002)	(0.003)
SPL-CZ02033-4E	Cast Iron (pig iron)	4.45	0.09	0.034	0.023	0.006	0.03	0.049	0.002	0.005	(0.003)			(0.002)	0.033

Analyte - Measured Values (continued)

Code	Pb	Sb	Sn	Ti	V	Zn	Size	Type
SPL-CZ02033-4B	0.004	(0.001)	0.001	0.006	0.004	0.008	Ø 40x18 mm	CRM
SPL-CZ02033-4C	0.003	(0.001)	0.002	0.01	0.015	0.016	Ø 40x18 mm	CRM
SPL-CZ02033-4D	0.007		(0.001)	0.009	0.012	0.009	Ø 40x18 mm	CRM
SPL-CZ02033-4E	(0.002)		(0.001)	0.011	0.015		Ø 40x18 mm	CRM

BS - Y Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	As	Ti	V	Size	Type
BS-Y2582-5	Pig Iron	3.67	0.183	0.596	0.072	0.117	0.171	0.502	(0.68)	0.0022	0.066	0.335	Ø 30x30 mm	CRM
BS-Y2582-3	Pig Iron	3.29	0.689	1.22	0.045	0.056	0.03	0.046		0.009	0.043	0.071	Ø 30x30 mm	CRM
BS-Y2582-6	Pig Iron	3.93	0.99	1.46	0.168	0.124	0.387	0.094	(0.112)	0.0018	0.105	0.506	Ø 30x30 mm	CRM
BS-Y2582-7	Pig Iron	4.13	1.85	2.06	0.306	0.111	0.157	0.026		0.043	0.399	0.821	Ø 30x30 mm	CRM
BS-Y2582-4	Pig Iron	3.7	0.451	0.857	0.087	0.076	0.117	0.032	(0.031)	0.0017	0.03	0.158	Ø 30x30 mm	CRM

NCS HS19701

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	As	Ti	V	Size	Type
NCS HS19701-1	Pig Iron - just available as set of 7	2.46	0.099	0.072	0.011	0.019	0.511	0.183		0.005	0.0059	0.009	Ø 30x30 mm - Set of 7 only	CRM
NCS HS19701-2	Pig Iron - just available as set of 7	2.99	0.937	0.329	0.033	0.038	0.08	0.194		0.024	0.216	0.044	Ø 30x30 mm - Set of 7 only	CRM
NCS HS19701-3	Pig Iron - just available as set of 7	3.29	0.689	1.22	0.045	0.056	0.03	0.046		0.009	0.043	0.071	Ø 30x30 mm - Set of 7 only	CRM
NCS HS19701-4	Pig Iron - just available as set of 7	3.7	0.451	0.857	0.087	0.076	0.117	0.032	(0.031)	0.0017	0.03	0.158	Ø 30x30 mm - Set of 7 only	CRM
NCS HS19701-5	Pig Iron - just available as set of 7	3.67	0.183	0.596	0.072	0.117	0.171	0.502	(0.68)	0.0022	0.066	0.335	Ø 30x30 mm - Set of 7 only	CRM
NCS HS19701-6	Pig Iron - just available as set of 7	3.93	0.9	1.46	0.168	0.124	0.387	0.094	(0.112)	0.0018	0.105	0.506	Ø 30x30 mm - Set of 7 only	CRM
NCS HS19701-7	Pig Iron - just available as set of 7	4.13	1.85	2.06	0.306	0.111	0.157	0.026		0.043	0.399	0.821	Ø 30x30 mm - Set of 7 only	CRM

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NCS HS20704

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Cu	As	B	Pb	Sb	Sn	Ti	V	Size	Type
NCS HS20704-1	Pig Iron - just available as set of 6	3.09	3.52	0.248	0.111	0.032	0.039	0.394	0.056	0.017	0.0018	0.046	0.028	0.329	0.117	Ø 32x23 mm - Set of 6 only	CRM
NCS HS20704-2	Pig Iron - just available as set of 6	3.67	2.74	0.403	0.63	0.09	0.172	0.153	0.045	0.022	0.0062	0.119	0.057	0.143	0.37	Ø 32x23 mm - Set of 6 only	CRM
NCS HS20704-3	Pig Iron - just available as set of 6	3.65	0.907	0.538	1.08	0.149	0.104	0.87	0.02	0.015	0.0051	0.024	0.106	0.56	0.627	Ø 32x23 mm - Set of 6 only	CRM
NCS HS20704-4	Pig Iron - just available as set of 6	4.03	1.76	0.9	0.106	0.074	0.212	0.494	0.025	0.03	0.0022	0.111	0.058	0.07	0.47	Ø 32x23 mm - Set of 6 only	CRM
NCS HS20704-5	Pig Iron - just available as set of 6	4.03	0.378	1.2	0.46	0.084	0.065	0.75	0.04	0.016	0.0048	0.073	0.105	0.174	0.226	Ø 32x23 mm - Set of 6 only	CRM
NCS HS20704-6	Pig Iron - just available as set of 6	4.56	1.21	0.251	0.045	0.037	0.325	0.368	0.002	0.029	0.0013	0.0014	0.0012	0.20	0.699	Ø 32x23 mm - Set of 6 only	CRM

NCS HS28705

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Co	Pb	Sb	Sn
NCS HS28705-1	Pig Iron - just available as set of 7	4.32	0.361	1.42	0.032	0.154	0.034	0.015	0.013	0.018	0.035	0.0057	0.001	(0.0004)	0.005
NCS HS28705-2	Pig Iron - just available as set of 7	3.9	0.656	1.38	0.057	0.128	0.021	0.013	0.0018	0.021	0.025	0.034	0.001	(0.0004)	0.0019
NCS HS28705-3	Pig Iron - just available as set of 7	3.61	1.27	0.882	0.218	0.101	0.041	0.05	0.02	0.036	0.024	0.01	0.0008	(0.0005)	0.0012
NCS HS28705-4	Pig Iron - just available as set of 7	3.27	1.85	0.726	0.16	0.066	0.093	0.099	0.055	0.077	0.0092	0.011	0.011	0.001	0.0018
NCS HS28705-5	Pig Iron - just available as set of 7	3.07	2.52	0.608	0.098	0.048	0.099	0.304	0.09	0.111	0.045	0.0083	0.0007	(0.0003)	0.001
NCS HS28705-6	Pig Iron - just available as set of 7	2.52	3.16	0.402	0.305	0.028	0.208	0.754	0.207	0.208	0.0065	0.0092	0.014	0.037	0.0088
NCS HS28705-7	Pig Iron - just available as set of 7	1.76	3.79	0.247	0.468	0.0095	0.345	1.05	0.56	0.507	0.022	0.0039	0.113	0.052	0.036

Analyte - Measured Values (continued)

Code	Ti	V	Zn	Size	Type
NCS HS28705-1	0.024	0.53	(0.0009)	Ø 30x30 mm - Set of 7 only	CRM
NCS HS28705-2	0.093	0.467		Ø 30x30 mm - Set of 7 only	CRM
NCS HS28705-3	0.131	0.361		Ø 30x30 mm - Set of 7 only	CRM
NCS HS28705-4	0.252	0.224	(0.001)	Ø 30x30 mm - Set of 7 only	CRM
NCS HS28705-5	0.334	0.135	(0.002)	Ø 30x30 mm - Set of 7 only	CRM
NCS HS28705-6	0.38	0.033	0.0039	Ø 30x30 mm - Set of 7 only	CRM
NCS HS28705-7	0.51	0.014	0.0045	Ø 30x30 mm - Set of 7 only	CRM

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NIST - C1145A

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	As	B	Bi	Co
NIST-C1145A	White Cast Iron	2.92	0.271	0.187	0.215	0.191	0.63	0.62	0.48	0.46	(0.04)	(0.03)	(0.02)	(<0.01)	0.058

Analyte - Measured Values (continued)

Code	Pb	Sb	Sn	Ti	V	Zr	Size	Type
NIST-C1145A	0.0012	(0.04)	(0.1)	0.012	0.112	(0.002)	Ø 32x19 mm	CRM

BAS - LARM Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	As	B	Bi
BAS-LARM 1	Low Alloy Cast Irons	(3.0)	(2.0)	(0.3)	(0.05)	(<0.01)	0.5	0.49		2.49		0.005		0.006	0.011
BAS-LARM 2	Low Alloy Cast Irons	(3.0)	(2.0)	(0.3)	(0.05)	(<0.01)	2.5		0.22		0.066	0.008	0.044		
BAS-LARM 3	Low Alloy Cast Irons	(3.0)	(2.0)	(0.3)	(0.05)	(<0.01)		1.8		1.2	0.042		0.092	0.003	0.022
BAS-LARM 4	Low Alloy Cast Irons	(3.0)	(2.0)	(0.3)	(0.05)	(<0.01)	1.19		1.0	0.26	0.014	0.008			
BAS-LARM 5	Low Alloy Cast Irons LARM 5/1	(3.0)	(2.0)	(0.3)	(0.05)	(<0.01)		2.46	0.62				0.018	0.0012	0.001

Analyte - Measured Values (continued)

Code	Pb	Sn	Ti	V	Size	Type
BAS-LARM 1			0.14	0.11	40x37x10 mm	RM
BAS-LARM 2	0.007	0.22	0.33		40x37x10 mm	RM
BAS-LARM 3				0.55	40x37x10 mm	RM
BAS-LARM 4	0.018	0.11	0.17		40x37x10 mm	RM
BAS-LARM 5	0.0005	0.025		0.24	40x37x10 mm	RM

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BAS - SCRM Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	As	Co	Sn	Ti
BAS-SCRM 672-1	Blast Furnace Irons	4.322	0.143	0.474	0.198	0.036	0.0186	0.083	0.117	0.1	0.0102	0.0079	0.139	0.0047	0.0373
BAS-SCRM 673	Blast Furnace Irons	2.47	1.72	0.133	0.328	0.006	0.037	0.147	0.006	0.023	0.028	0.044	0.053	0.0191	0.072
BAS-SCRM 674	Blast Furnace Irons	3.32	0.48	1.48	0.011	0.081	0.021	0.144	0.048	0.101	0.004	0.028	0.014	0.014	0.023
BAS-SCRM 675	Blast Furnace Irons	1.92	1.29	1.81	0.045	0.072	0.08	0.21	0.034	0.012	0.007	0.035	0.023	0.0062	0.007

Analyte - Measured Values (continued)

Code	V	Zn	Size	Type
BAS-SCRM 672-1	0.0988		40x37x10 mm	CRM
BAS-SCRM 673	0.059	0.0004	40x37x10 mm	CRM
BAS-SCRM 674	0.024	0.0187	40x37x10 mm	CRM
BAS-SCRM 675	0.178	0.0006	40x37x10 mm	CRM

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MBH - 11X C Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Mg	As	B	Bi
MBH-11X C1 Q	Low Alloy Iron	2.82	1.4	1.341	0.092	0.0349	0.335	0.556	0.062	0.154	0.069		0.0105	0.054	0.0093
MBH-11X C2 U	Low Alloy Iron	3.39	1.08	1.2	0.28	0.098	0.87	1.71	0.12	0.11	0.053		0.029	0.022	0.005
MBH-11X C3 AB	Cast iron	3.45	0.849	0.43	0.45	0.20	2.02	3.22	0.21	0.30	0.01		0.097	0.005	0.015
MBH-11X C4 R	Low alloy iron	1.86	2.92	0.493	0.108	0.098	1.531	2.02	0.101	0.345	0.04	0.008	0.005	0.0086	0.0144
MBH-11X C5 W	Low alloy iron	2.52	2.09	0.846	0.08	0.096	1.111	1.595	0.471	1.8	0.0484		0.0199	0.011	0.0108
MBH-11X C7 P	Low Alloy Iron	3.24	0.604	2.214	0.0587	0.081	0.61	0.0273	0.0401	0.072	0.029		0.0110	0.0099	
MBH-11X C8 U	Low alloy iron	2.5	1.38	0.424	0.831	0.154	0.36	0.175	0.128	0.259	(0.1)	0.008	0.077	0.033	0.0164
MBH-11X C9 D	Low Alloy Iron	3.24	1.462	1.886	0.069	0.026	1.206	2.79	0.155	0.581	0.051		0.068	0.0049	
MBH-11X C10 C	Low Alloy Iron	3.48	2.1	0.696	0.103	0.05	0.302	2.673	0.335	1.54	0.104		0.02		

Analyte - Measured Values (continued)

Code	Co	N	Nb	Pb	Sb	Se	Sn	Te	Ti	V	W	Zn	Zr	Size	Form	Type
MBH-11X C1 Q	0.0407	0.0095	0.091	0.0107	0.055	0.005	0.0248		0.196	0.1036		0.0051	0.0072	Ø 40x17 mm	CC	CRM
MBH-11X C2 U	0.22	0.011	0.028	0.023	0.11	0.03	0.048		0.094	0.32	0.06			Ø 40x15 mm	CC	prov.
MBH-11X C3 AB	0.24	0.010	0.15	0.01	0.25	0.018	0.21		0.04	0.69	0.052	0.036		Ø 40x17 mm	CC	CRM
MBH-11X C4 R	0.0316	0.0078	0.0373	0.019	0.015	0.021	0.0102		0.08	0.0208	0.12	0.0083	0.0031	Ø 40x15 mm	CC	CRM
MBH-11X C5 W	0.0558	0.0171	0.0403	0.0295	0.0265	(0.005)	0.0371	0.001	0.054	0.089	0.0297	(0.019)	0.005	Ø 40x15 mm	CC	CRM
MBH-11X C7 P	0.0068	0.0153	0.0195	0.0106	0.009		0.0110		0.064	0.0081	0.053	0.0152		Ø 40x15 mm	CC	prov.
MBH-11X C8 U	0.081	0.0032	0.031	0.0057	0.0631	0.028	0.08		0.071	0.0452	0.013	0.0051	0.004	Ø 40x15 mm	CC	CRM
MBH-11X C9 D	0.1301		0.0766	0.0052	0.149		0.04	0.011	-0.062	0.359	0.304	0.009		Ø 40x15 mm	CC	prov.
MBH-11X C10 C		0.0096		0.005	0.0095		0.0458		0.0709	0.0589	0.327			Ø 40x15 mm	CC	CRM

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Vaskut - Cast Iron

		Analyte - Measured Values							
Code	Description	C	Si	Mn	P	S		Size	Type
VASKUT-120	Cast Iron	3.34	1.84	0.59	0.059	0.18		30x30x13 mm	CRM
VASKUT-121	Cast Iron	3.32	(1.86)	0.61	0.135	0.17		30x30x13 mm	CRM
VASKUT-122	Cast Iron	3.31	1.72	0.61	0.22	0.2		30x30x13 mm	CRM
VASKUT-123	Cast Iron	3.3	(1.87)	0.69	0.31	0.074		30x30x13 mm	CRM
VASKUT-124	Cast Iron	2.97	1.63	0.62	0.5	0.051		30x30x13 mm	CRM
VASKUT-125	Cast Iron	3.2	(1.87)	0.73	0.7	0.019		30x30x13 mm	CRM
VASKUT-126	Cast Iron	3.16	1.9	0.81	1.41	0.016		30x30x13 mm	CRM
VASKUT-127	Cast Iron	3.14	1.81	0.79	1.55	0.014		30x30x13 mm	CRM

Vaskut - Cast Iron low alloyed

		Analyte - Measured Values											
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Sn	Size	Type
VASKUT-201	Cast Iron, low alloyed	2.77	1.71	0.74	0.024	(0.009)	2.9	2.47	0.13	0.1	(0.31)	30x30x13 mm	CRM
VASKUT-202	Cast Iron, low alloyed	3.16	1.77	0.81	0.024	(0.01)	2.36	2.07	0.44	0.24	(0.21)	30x30x13 mm	CRM
VASKUT-203	Cast Iron, low alloyed	3.14	1.78	0.79	0.024	(0.009)	1.79	1.63	0.91	0.43	(0.16)	30x30x13 mm	CRM
VASKUT-204	Cast Iron, low alloyed	3.15	1.79	0.8	0.023	(0.009)	1.22	1.09	1.38	0.64	(0.215)	30x30x13 mm	CRM
VASKUT-205	Cast Iron, low alloyed	3.32	1.88	0.8	0.025	(0.01)	0.64	0.61	1.79	0.81	(0.035)	30x30x13 mm	CRM
VASKUT-206	Cast Iron, low alloyed	3.32	1.84	0.75	0.027	(0.01)	0.12	0.21	2.14	1.01	(0.107)	30x30x13 mm	CRM

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CTIF - FL Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	As	B	Bi	Co
CTIF-FL1	Cast Iron, low alloyed	2.1	3.2	0.8	0.118	0.0765	0.06	0.245	0.038	0.0195					(0.022)
CTIF-FL2	Cast Iron, low alloyed	2.18	3.61	0.04	0.049	0.082	0.44	0.0238	(0.004)	0.0497	(0.006)			(0.0135)	0.0263
CTIF-FL3	Cast Iron, low alloyed	2.3	2.1	0.27	0.729	(0.013)	0.107	0.553	0.106	0.102					
CTIF-FL4	Cast Iron, low alloyed	2.6	2.91	0.5	0.288	0.137	0.45	0.061	0.09	0.0168		(0.05)		(0.003)	
CTIF-FL5	Cast Iron, low alloyed	2.8	2.3	0.4	0.02	(0.005)	0.35	0.05	0.01	0.5			(0.002)	(0.0005)	0.01
CTIF-FL6	Cast Iron, low alloyed	3.1	1.4	0.6	0.012	0.18	0.167	1.03	0.5	0.079			0.008		0.028
CTIF-FL7-1	Cast Iron, low alloyed	3.22	2.55	0.1	1.34	0.048	0.043	0.232	0.335	0.351		(0.0266)			
CTIF-FL10	Cast Iron, low alloyed	3.1	1.3	0.85	0.323	0.066	(0.07)	0.1	0.0335	0.104	(0.03)	(0.022)	0.012	(0.004)	

Analyte - Measured Values (continued)

Code	N	Nb	Pb	Sb	Sn	Te	Ti	V	W	Zn		Size	Type
CTIF-FL1					0.305		0.02	0.015				Ø 43x5 mm, 2 pieces	RM
CTIF-FL2					0.14		0.075	0.201				Ø 43x5 mm, 2 pieces	RM
CTIF-FL3	0.008				0.111		0.05	0.049				Ø 43x5 mm, 2 pieces	RM
CTIF-FL4	0.007				0.011		0.0296	0.116				Ø 43x5 mm, 2 pieces	RM
CTIF-FL5					0.07		0.01	0.01				Ø 43x5 mm, 2 pieces	RM
CTIF-FL6					0.005		0.15	0.033				Ø 43x5 mm, 2 pieces	RM
CTIF-FL7-1	0.0035				0.0291		0.0525	0.0796				Ø 43x5 mm, 2 pieces	RM
CTIF-FL10		(0.018)	(0.002)	(0.032)	0.028	(0.001)	0.045	0.048	(0.02)	(0.029)		Ø 43x5 mm, 2 pieces	RM

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CTIF - FO Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Co	N	Sn	Te
CTIF-FO5	Cast Iron, low alloyed	3.2	0.7	0.2	1.3	0.027	0.3	0.172	0.41	0.12				0.109	
CTIF-FO6	Cast Iron, low alloyed	3.49	0.55	0.715	0.87	0.106	0.45	0.128	0.202	0.12				0.039	
CTIF-FO7	Cast Iron, low alloyed	2.45	0.675	0.7	0.84	0.085	0.455	0.15	0.26	0.125					
CTIF-FO8	Cast Iron, low alloyed	3.6	1.04	0.37	0.107	0.021	0.3	0.3	0.005	0.215				0.05	
CTIF-FO9	Cast Iron, low alloyed	2.7	1.5	0.7	0.02	0.015	0.18	0.355	0.13	0.31				0.144	
CTIF-FO10	Cast Iron, low alloyed	3.5	0.67	1.05	0.2	0.101	0.38	0.118	0.2	0.114					
CTIF-FO11	Cast Iron, low alloyed	3.45	1.57	0.685	0.052	0.103	0.34	0.235	0.225	0.211		(0.013)		0.066	
CTIF-FO12	Cast Iron, low alloyed	3.71	1.86	0.44	0.038	0.004				0.77	0.008			0.011	
CTIF-FO17	Cast Iron, low alloyed	3.01	2.48	0.475	0.47	0.168	(0.016)	0.021		(0.006)		0.032		0.024	
CTIF-FO18	Cast Iron, low alloyed	3.43	1.24	0.59	1.34	0.136	0.17	0.14	0.179	0.049			0.004	0.046	
CTIF-FO19	Cast Iron, low alloyed	4.04	1.05	1.05	0.032	0.057									0.0005

Analyte - Measured Values (continued)

Code	Ti	V	Size	Type
CTIF-FO5	0.04	0.14	Ø 43x5 mm, 2 pieces	RM
CTIF-FO6	0.08	0.11	Ø 43x5 mm, 2 pieces	RM
CTIF-FO7	0.065	0.13	Ø 43x5 mm, 2 pieces	RM
CTIF-FO8	0.055	0.014	Ø 43x5 mm, 2 pieces	RM
CTIF-FO9	0.017	0.022	Ø 43x5 mm, 2 pieces	RM
CTIF-FO10	0.1	0.08	Ø 43x5 mm, 2 pieces	RM
CTIF-FO11	0.078	0.113	Ø 43x5 mm, 2 pieces	RM
CTIF-FO12			Ø 43x5 mm, 2 pieces	RM
CTIF-FO17	0.032	0.018	Ø 43x5 mm, 2 pieces	RM
CTIF-FO18	0.057	0.102	Ø 43x5 mm, 2 pieces	RM
CTIF-FO19			Ø 43x5 mm, 2 pieces	RM

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CTIF - FT Series

		Analyte - Measured Values												
Code	Description	C	Si	Mn	P	S	Cr	Ni	Cu	Sn	Ti	V	Size	Type
CTIF-FT1	Cast Iron, low alloyed	2.9	2.12	0.71	0.12	0.025	0.057	0.11	0.012	0.067	0.19	0.525	Ø 43x5 mm, 2 pieces	RM
CTIF-FT2-1	Cast Iron, low alloyed	3.39	1.415	0.78	0.045	0.095	0.03	0.07	0.01		0.1	0.405	Ø 43x5 mm, 2 pieces	RM
CTIF-FT3	Cast Iron, low alloyed	3.2	1.55	0.345	0.063	0.051	0.685	0.092	0.015		0.2	0.016	Ø 43x5 mm, 2 pieces	RM

CTIF - Other Cast Irons

		Analyte - Measured Values													
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	As	Co	N	Ti
CTIF-FAL1	Cast Iron, low alloyed	3.0	1.0	0.2	0.04	<0.001	0.04	0.06	0.015	0.2	2.1				0.01
CTIF-FPA1	Cast Iron, low alloyed	3.09	0.03	0.1	0.0022	0.0009	0.071	0.045	0.0109	0.0622		0.0109	0.0097	0.0125	0.001

	Analyte - Measured Values (continued)			
Code	V		Size	Type
CTIF-FAL1			Ø 43x5 mm, 2 pieces	RM
CTIF-FPA1	0.001		Ø 43x5 mm, 2 pieces	RM

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MQ - Cast Irons by DSZU

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Mg	As	B	Ca
MQ-CH01	Cast iron	2.61	1.95	0.258	0.012	0.0045	0.88	0.072	0.07	0.097	0.079	(0.0005)		(0.03)	(0.001)
MQ-CH02	Cast iron	3.18	1.35	1.09	0.007	0.0116	0.59	0.658	0.224	0.038	0.026	(0.002)		(0.016)	(0.001)
MQ-CH03	Cast iron	3.54	0.57	0.4	0.023	0.034	0.612	0.187	(0.019)	0.194	0.035	(0.0001)	(0.004)	(0.001)	(0.002)
MQ-CH04	Cast iron	4.01	0.73	1.77	0.074	0.018	0.1	0.273	(0.004)	0.55	0.014	(0.0001)		(0.0007)	(0.0007)
MQ-CH05	Cast iron	3.99	0.46	2.23	0.119	0.039	1.63	0.85	0.109	0.61	(0.002)	(0.001)		(0.03)	(0.002)
MQ-CH06	Cast iron	3.88	0.28	0.85	0.05	0.05	(2.8)	1.23	0.29	1.03	0.025			(0.02)	(0.001)
MQ-CH07	Cast iron	2.33	3.01	1.36	0.09	0.064	0.34	0.403	0.66	0.35	0.036	(0.01)		(0.13)	(0.001)
MQ-CH08	Cast iron	3.02	2.05	0.79	0.056	0.058	2.13	2.52	0.96	1.6	0.29			(0.08)	(0.001)

Analyte - Measured Values (continued)

Code	Co	Nb	Pb	Sn	Ti	V	W		Size	Type
MQ-CH01	(0.06)	(0.01)		(0.05)	0.132	0.134	(0.02)		30-35x35-40x18-20 mm	CRM
MQ-CH02	(0.06)	(0.4)		(0.014)	0.161	(0.005)			Ø 35-37x18-20 mm	CRM
MQ-CH03	(0.05)	(0.01)	(0.01)	(0.004)	0.059	0.009	(0.006)		30-40x35-45x14-18 mm	CRM
MQ-CH04	(0.05)	(0.005)	(0.007)	(0.002)	0.025	(0.004)	(<0.0002)		30-40x35-45x14-18 mm	CRM
MQ-CH05	(0.07)	(0.3)		(0.01)	0.07	0.2			30-35x35-45x18-20 mm	CRM
MQ-CH06	(0.07)	(0.05)		(0.03)	0.33	0.205	0.1		30-35x35-45x18-20 mm	CRM
MQ-CH07		(0.08)		(0.07)	0.15	0.52			30-35x35-45x18-20 mm	CRM
MQ-CH08	(0.07)	(0.3)		(0.008)	0.315	0.34			30-35x35-45x18-20 mm	CRM

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BS - Y Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ce	Mg	As	B	Nb
BS-Y2863-1	Chill Cast	1.78	3.62	2.41	0.021	0.009	0.031	4.77	0.038	0.022				0.0024	0.0052
BS-Y2863-2	Chill Cast	2.5	3.14	1.83	0.069	0.026	0.136	3.73	0.096	0.02				0.0025	
BS-Y2863-3	Chill Cast	3.32	2.27	1.27	0.115	0.049	0.49	2.01	0.313	0.62				0.056	
BS-Y2863-4	Chill Cast	2.99	1.54	0.93	0.31	0.059	0.76	0.93	0.61	0.97				0.041	
BS-Y2863-5	Chill Cast	3.47	0.89		0.78	0.564	0.07	1.53	0.62	0.67	0.365			0.06	
BS-Y2863-7	Chill Cast	1.98	3.1	3.42	0.067	0.0061	0.15	4.47	0.052	0.089	0.019	0.05	(0.021)	0.1	0.041
BS-Y2863-9	Chill Cast	3.04	1.53	1.43	0.049	0.015	0.72	1.59	1.38	0.269		0.043	(0.041)	0.153	0.11
BS-Y2863-11	Chill Cast	4.03	0.79	0.61	0.613	0.026	1.65	0.46	0.94	0.96		0.0075	(0.022)	0.053	0.33
BS-Y2863-12	Chill Cast	3.77	0.15	0.158	0.053	0.057	2.31	0.192	0.44	0.55		0.0024	(0.0097)	0.0078	0.21
BS-Y451042	Chill Cast	3.47	2.11	0.71	0.043	0.012	1.02	1.39	0.22	0.35		0.023			
BS-Y451043	Chill Cast	3.69	1.5	0.49	0.063	0.049	0.47	0.23	0.22	0.34					
BS-Y451044	Chill Cast	3.36	2.44	0.231	0.04	0.006	0.16	2.24			0.006	0.033			
BS-Y451045	Chill Cast	3.9	2.29	0.12	0.023	0.0027	0.028	0.45	0.003	0.022		0.033			
BS-Y451047	Chill Cast	3.73	2.02	2.35	0.51	0.0036	1.58	3.57	0.05	1.98		0.06		0.31	0.012
BS-Y451052-1	Cast Iron	3.31	0.098	1.54	0.369	0.0047	1.17	2.57	1.47	0.449				0.177	0.018
BS-Y451087-5	Chill Cast	3.58	1.74	0.44	0.034	0.018	0.5	0.59	0.18	0.26		0.039		0.019	

Analyte - Measured Values (continued)

Code	Pb	Sb	Sn	Ti	V	W	Size	Type
BS-Y2863-1				0.068	1.13		Ø 30x30 mm	CRM
BS-Y2863-2				0.066	0.61		Ø 30x30 mm	CRM
BS-Y2863-3				0.176	0.45		Ø 30x30 mm	CRM
BS-Y2863-4				0.09	0.082		Ø 30x30 mm	CRM
BS-Y2863-5				0.133	0.129	0.158	Ø 30x30 mm	CRM
BS-Y2863-7	(0.0025)	(0.01)	(0.0073)	0.06	0.87		Ø 30x30 mm	CRM
BS-Y2863-9	(0.093)	(0.116)	(0.124)	0.212	0.41		Ø 30x30 mm	CRM
BS-Y2863-11	(0.0057)	(0.174)	(0.108)	0.29	0.079	0.01	Ø 30x30 mm	CRM
BS-Y2863-12	(0.056)	(0.471)	(0.307)	0.03	0.229	0.13	Ø 30x30 mm	CRM
BS-Y451042				0.029	0.15		Ø 30x30 mm	CRM
BS-Y451043		0.12			0.11		Ø 30x30 mm	CRM
BS-Y451044				0.073			Ø 30x30 mm	CRM
BS-Y451045				0.016	0.0014		Ø 30x30 mm	CRM
BS-Y451047				0.4	0.018		Ø 30x30 mm	CRM
BS-Y451052-1					0.952	0.015	Ø 30x30 mm	CRM
BS-Y451087-5			0.0045	0.055	0.2		Ø 30x30 mm	CRM

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Japanese Set KTC-12

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	B	Bi	Ca
SEI-KTC-12/1-01	Plain Cast Iron (Set of 10 only)	3.96	0.4	0.8	0.002	0.034	0.1		0.3	0.5	0.001		0.089		
SEI-KTC-12/1-02	Plain Cast Iron (Set of 10 only)	3.87	0.84	0.63	0.009	0.018	0.21		0.24	0.42	0.013		0.077	0.01	
SEI-KTC-12/1-03	Plain Cast Iron (Set of 10 only)	3.73	1.18	0.05	0.017	0.076	0.28		0.11	0.27	0.018		0.052	0,013	
SEI-KTC-12/1-04	Plain Cast Iron (Set of 10 only)	3.52	1.59	0.5	0.3	0.061	0.43	0.02	0.42	0.2	0.033		0.029	0.004	
SEI-KTC-12/1-05	Plain Cast Iron (Set of 10 only)	3.4	2.11	0.41	0.11	0.047	0.26	0.54	0.047	0.11	0.054	0.001	0.008	0.001	
SEI-KTC-12/1-06	Plain Cast Iron (Set of 10 only)	3.35	2.22	0.35	0.076	0.026	0.35	0.42	0.002	0.01	0.029	0.015	0.001	0.001	0.0008
SEI-KTC-12/1-07	Plain Cast Iron (Set of 10 only)	3.3	2.45	0.32	0.05	0.016	0.03	0.28			0.052	0.11			0.0013
SEI-KTC-12/1-08	Plain Cast Iron (Set of 10 only)	3.04	2.71	0.26	0.03	0.01		0.2			0.059	0.067			0.0017
SEI-KTC-12/1-09	Plain Cast Iron (Set of 10 only)	2.92	2.95	0.21	0.52	0.005		0.1			0.068	0.011			0.0028
SEI-KTC-12/1-10	Plain Cast Iron (Set of 10 only)	2.5	3.09	0.1	0.68	0.0027		0.01		0.52	0.097	0.028			0.0052

Analyte - Measured Values (continued)

Code	Pb	Sb	Se	Sn	Ti	V	Zn		Size	Type
SEI-KTC-12/1-01		0.15					0.005		Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-12/1-02		0.1					0.002		Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-12/1-03		0.48					0.01		Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-12/1-04		0.008				0.01	0.024		Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-12/1-05	0.007	0.004		0.001		0.14	0.034		Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-12/1-06	0.006			0.41	0.013	0.048			Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-12/1-07	0.002			0.3	0.095	0.1			Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-12/1-08	0.016			0.2	0.059	0.2			Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-12/1-09	0.045			0.11	0.17	0.31			Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-12/1-10	0.031			0.045	0.22	0.004			Ø 34x5 mm - Set of 10 only	SUS

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NCS HS11711A

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ce	Mg	B	La	Sn
NCS HS11711A-1	Low Alloy Cast Iron (Set of 7 only)	3.31	0.93	0.317	0.051	0.029	2.02	0.063	0.811	0.571		0.00033	0.524		0.282
NCS HS11711A-2	Low Alloy Cast Iron (Set of 7 only)	3.18	2.28	0.715	0.447	0.0061	1.62	1.01	0.559	1.12	0.034	0.038	0.261	0.015	0.107
NCS HS11711A-3	Low Alloy Cast Iron (Set of 7 only)	3.72	1.5	1.12	0.251	0.038	1.61	0.528	0.467	0.846	0.0002	0.014	0.096	0.006	0.289
NCS HS11711A-4	Low Alloy Cast Iron (Set of 7 only)	4.03	0.246	0.987	0.727	0.098	0.476	0.054	0.018	0.148	<0.00005	0.0015	0.021	<0.00005	0.0035
NCS HS11711A-5	Low Alloy Cast Iron (Set of 7 only)	3.0	2.65	1.27	0.14	0.0034	0.784	0.94	0.384	0.536	0.0033	0.077	0.0025	0.096	0.038
NCS HS11711A-6	Low Alloy Cast Iron (Set of 7 only)	2.69	3.68	1.7	0.395	0.021	1.31	0.247	0.224	0.338	0.0088	0.034	0.524	0.0057	0.102
NCS HS11711A-7	Low Alloy Cast Iron (Set of 7 only)	1.81	3.35	1.99	0.091	0.0082	0.212	1.09	0.152	1.73	0.122	0.001	0.018	0.023	0.0064

Analyte - Measured Values (continued)

Code	Ti	V	W	Size	Type
NCS HS11711A-1	0.223	0.329	0.323	Ø 30x20 mm - Set of 7 only	CRM
NCS HS11711A-2	0.478	0.201	0.172	Ø 30x20 mm - Set of 7 only	CRM
NCS HS11711A-3	0.388	0.133	0.049	Ø 30x20 mm - Set of 7 only	CRM
NCS HS11711A-4	0.031	0.317	0.0073	Ø 30x20 mm - Set of 7 only	CRM
NCS HS11711A-5	0.078	0.043	0.284	Ø 30x20 mm - Set of 7 only	CRM
NCS HS11711A-6	0.129	0.25	0.444	Ø 30x20 mm - Set of 7 only	CRM
NCS HS11711A-7	0.131	0.057	0.72	Ø 30x20 mm - Set of 7 only	CRM

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NIST

		Analyte - Measured Values												
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V		Size	Type
NIST-C1290	High Alloy (HC-250 + V)	3.04	0.971	0.66	0.03	0.013	30.5	0.917	(0.041)	0.065	0.442		Ø 32x19 mm	CRM
NIST-C1291	High Alloy (Ni-Hard, Type I)	2.67	1.34	1.14	0.028	0.032	2.78	4.34	0.32	0.26	0.031		Ø 32x19 mm	CRM
NIST-C1292	High Alloy (Ni-Hard, Type IV)	3.47	0.59	0.55	0.049	0.016	11.4	5.04	0.25	0.36	0.041		Ø 32x19 mm	CRM

CTIF - NH Series

		Analyte - Measured Values											
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu		Size	Type
CTIF-NH1	Cast Iron, high alloyed	2.98	1.35	0.9	0.06	0.105	0.83	1.38	1.45	1.99		Ø 43x5 mm, 2 pieces	RM
CTIF-NH2	Cast Iron, high alloyed	2.5	1.81	1.04	0.047	0.058	1.26	1.78	1.01	1.02		Ø 43x5 mm, 2 pieces	RM
CTIF-NH3	Cast Iron, high alloyed	3.47	0.85	0.175	0.36	0.024	1.76	2.53	0.73	0.031		Ø 43x5 mm, 2 pieces	RM
CTIF-NH4	Cast Iron, high alloyed	2.84	0.49	0.28	0.12	0.022	2.46	3.6	0.3	0.09		Ø 43x5 mm, 2 pieces	RM
CTIF-NH5	Cast Iron, high alloyed	2.31	0.31	0.24	0.115	0.04	2.85	4.9	0.017	0.035		Ø 43x5 mm, 2 pieces	RM
CTIF-NH6	Cast Iron, high alloyed	2.7	2.28	0.355	0.066	0.036	6.6	7.06	0.11	0.115		Ø 43x5 mm, 2 pieces	RM
CTIF-NH7	Cast Iron, high alloyed	3.43		0.63	0.035	0.022	9.02	5.53		0.105		Ø 43x5 mm, 2 pieces	RM
CTIF-NH7-1	Cast Iron, high alloyed	3.43	0.95	0.63	0.035	0.022	9.02	5.53		0.105		Ø 43x5 mm, 2 pieces	RM
CTIF-NH7-2	Cast Iron, high alloyed	3.2	1.2	0.91	0.034	0.012	8.87	5.53		0.108		Ø 43x5 mm, 2 pieces	RM
CTIF-NH8	Cast Iron, high alloyed	2.98	0.8	0.57	0.052	0.076	5.03	8.16	0.125	0.065		Ø 43x5 mm, 2 pieces	RM
CTIF-NH9	Cast Iron, high alloyed	3.13	1.24	0.65	0.087	0.029	11.7	4.11	0.059	0.203		Ø 43x5 mm, 2 pieces	RM

CTIF - FCR Series

		Analyte - Measured Values											
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu		Size	Type
CTIF-FCR1	Cast Iron, Cr-alloyed	2.46	0.45	0.63	0.019	0.007	18.71	1.3	1.41	0.031		Ø 43x5 mm, 2 pieces	RM
CTIF-FCR2	Cast Iron, Cr-alloyed	2.86	1.07	0.74	0.137	0.055	11.8	1.87	3.88	0.135		Ø 43x5 mm, 2 pieces	RM
CTIF-FCR3	Cast Iron, Cr-alloyed	2.08		1.02	0.034	0.035	14.85	0.652	0.91	0.0485		Ø 43x5 mm, 2 pieces	RM
CTIF-FCR4	Cast Iron, Cr-alloyed	2.47	1.4	2.05	0.097	0.066	24.2	0.571	2.16	1.32		Ø 43x5 mm, 2 pieces	RM
CTIF-FCR5	Cast Iron, Cr-alloyed	3.43	0.35	0.62	0.052	0.0175	28.5	2.69	3.27	1.02		Ø 43x5 mm, 2 pieces	RM
CTIF-FCR6	Cast Iron, Cr-alloyed	1.44	0.76	1.47	0.201	0.086	30.84	0.188	0.455	0.48		Ø 43x5 mm, 2 pieces	RM
CTIF-FCR7	Cast Iron, Cr-alloyed	3.59	1.07	0.365	0.099	0.0427	33.65	0.947	2.62	0.704		Ø 43x5 mm, 2 pieces	RM

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CTIF - FCRNI Series

		Analyte - Measured Values										
Code	Description	C	Si	Mn	P	S	Cr	Ni	Cu		Size	Type
CTIF-FCRNI1	Cast Iron, high alloyed	1.27	1.63	0.71	0.41	0.06	26.2	16.5	0.02		Ø 43x5 mm, 2 pieces	RM
CTIF-FCRNI2	Cast Iron, high alloyed	2.02	1.5	0.61	0.185	0.024	29.0	13.05			Ø 43x5 mm, 2 pieces	RM
CTIF-FCRNI3	Cast Iron, high alloyed	2.74	0.69	0.47	0.036	0.011	31.65	11.05			Ø 43x5 mm, 2 pieces	RM

CTIF - Other Series

		Analyte - Measured Values													
Code	Description	C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ce	Mg	As	Co	Pb
CTIF-3601B	Magnesium treated cast iron	3.0	2.1	0.35	0.037	(0.005)	0.029	1.08	0.019		<0.01	0.-0.184			(<0.002)
CTIF-4497	Magnesium treated cast iron	3.12	2.66	0.605	0.043	(<0.002)	0.04	1.9	0.048			0.-0.184			
CTIF-5783	Magnesium treated cast iron	2.55	2.3	0.2	0.0266	(0.003)	0.05	1.23	0.11			0.-0.184	0.0016	0.0074	
CTIF-5037	Magnesium treated cast iron	3.04	3.4	0.76	0.043	(0.0025)	0.014	0.64				0.-0.184			
CTIF-4500	Magnesium treated cast iron	3.38	1.97	0.6	0.059	(0.002)	0.014	1.45		0.033	0.023	0.-0.184		0.065	
CTIF-5781	Magnesium treated cast iron	3.35	2.5	0.26	0.03	(0.0025)	0.04	0.83	0.0061			0.-0.184		(0.004)	
CTIF-7160	Magnesium treated cast iron	3.1	2.4	0.57	0.05	(0.001)	(0.1)	1.0	0.08	(0.02)	0.02	0.-0.184	0.009	0.09	
CTIF-8018	Magnesium treated cast iron	3.0	3.0	0.7	0.07	(0.0015)	0.09	0.127	0.08	0.02	(<0.02)	0.-0.184			
CTIF-6135	Magnesium treated cast iron	3.6	0.9	0.38	0.013	(0.003)	0.04	1.98	0.0219	(0.006)		0.-0.184		0.037	
CTIF-6736	Magnesium treated cast iron	2.8	1.6	0.65	0.012	(0.002)	0.03	1.7	0.0258			0.-0.184			
CTIF-8532	Magnesium treated cast iron	3.7	2.6	0.288	0.05		0.04	0.888	0.0443		<0.025	0.-0.184			
CTIF-6134	Magnesium treated cast iron	3.7	1.6	0.25	0.03	<0.01	0.04	2.0	0.02		<0.03	0.-0.184			

	Analyte - Measured Values (continued)						
Code	Sb	Sn	Ti	V	Zn	Size	Type
CTIF-3601B			0.016	(0.005)	<0.05	Ø 43x5 mm, 2 pieces	RM
CTIF-4497		0.094	0.031	0.44		Ø 43x5 mm, 2 pieces	RM
CTIF-5783			0.015	0.0127		Ø 43x5 mm, 2 pieces	RM
CTIF-5037			0.029			Ø 43x5 mm, 2 pieces	RM
CTIF-4500						Ø 43x5 mm, 2 pieces	RM
CTIF-5781			0.0208	0.015		Ø 43x5 mm, 2 pieces	RM
CTIF-7160			0.013	0.018		Ø 43x5 mm, 2 pieces	RM
CTIF-8018	(0.01)	0.07	0.06	0.39		Ø 43x5 mm, 2 pieces	RM
CTIF-6135			0.007	0.0155		Ø 43x5 mm, 2 pieces	RM
CTIF-6736			0.008	(0.03)		Ø 43x5 mm, 2 pieces	RM
CTIF-8532		0.0303	0.02	0.07		Ø 43x5 mm, 2 pieces	RM
CTIF-6134						Ø 43x5 mm, 2 pieces	RM

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MBH - 11X HPC Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo		Size	Form	Type
MBH-11X HPC1 H	High P cast iron	3.29	3.27	0.62	0.808	0.0035	1.056		0.06		Ø 40x15 mm	CC	CRM
MBH-11X HPC3 J	High P cast iron	3.38	1.63	1.287	2.01	0.0473	1.48	2.18	0.12		Ø 40x15 mm	CC	CRM
MBH-11X HPC5 A	High P Cast Iron	3.68	1.175	1.028	0.246	0.223	1.42				Ø 40x17 mm	CC	CRM

NCS - HS11712A

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	La	N
NCS HS11712A-1	Nitrogen Cast Iron (Set of 7 only)	1.75	3.4	0.08	0.58	0.119	2.48	0.03	0.031	0.025	0.248	<0.0001	0.0006	<0.0001	0.015
NCS HS11712A-2	Nitrogen Cast Iron (Set of 7 only)	2.22	2.44	0.301	0.043	0.058	2.13	0.341	0.087	0.458	0.06	0.001	0.0085	0.01	0.024
NCS HS11712A-3	Nitrogen Cast Iron (Set of 7 only)	2.55	1.5	0.878	0.071	0.045	0.417	0.519	0.354	0.641	0.034	0.027	0.024	0.0061	0.024
NCS HS11712A-4	Nitrogen Cast Iron (Set of 7 only)	3.16	1.96	0.462	0.396	0.017	1.4	0.778	0.428	0.921	0.0073	<0.0001	0.025	<0.0001	0.0073
NCS HS11712A-5	Nitrogen Cast Iron (Set of 7 only)	3.52	1.17	0.311	0.42	0.019	0.766	1.03	0.629	0.389		<0.0001	0.021	<0.0001	0.0047
NCS HS11712A-6	Nitrogen Cast Iron (Set of 7 only)	4.02	0.163	1.41	0.021	0.026	0.112	1.89	0.726	1.83	0.019	<0.0001	0.104	<0.0001	0.013
NCS HS11712A-7	Nitrogen Cast Iron (Set of 7 only)	3.94	0.918	1.38	0.085	0.0048	1.05	1.37	0.168	1.1	0.214	<0.0001	0.056	<0.0001	0.0063

Analyte - Measured Values (continued)

Code	Sn	Ti	V		Size	Type
NCS HS11712A-1	0.0031	0.038	0.021		Ø 30x28 mm - Set of 7 only	CRM
NCS HS11712A-2	0.044	0.065	0.055		Ø 30x28 mm - Set of 7 only	CRM
NCS HS11712A-3	0.021	0.027	0.085		Ø 30x28 mm - Set of 7 only	CRM
NCS HS11712A-4	0.024	0.065	0.166		Ø 30x28 mm - Set of 7 only	CRM
NCS HS11712A-5	0.013	0.161	0.324		Ø 30x28 mm - Set of 7 only	CRM
NCS HS11712A-6	0.057	0.238	0.509		Ø 30x28 mm - Set of 7 only	CRM
NCS HS11712A-7	0.134	0.114	0.39		Ø 30x28 mm - Set of 7 only	CRM

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SEI-KTC-9 B1-B6

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu		Size	Type
SEI-KTC-9 B1	Alloy Cast Iron (Set of 6 only)	2.4	3.0	0.05	0.005	0.1	1.0	1.0	0.05	0.05		Ø 34x5 mm - Set of 6 only	SUS
SEI-KTC-9 B2	Alloy Cast Iron (Set of 6 only)	2.6	2.8	0.2	0.025	0.09	0.8	0.8	0.2	0.2		Ø 34x5 mm - Set of 6 only	SUS
SEI-KTC-9 B3	Alloy Cast Iron (Set of 6 only)	3.0	2.2	0.4	0.05	0.06	0.6	0.6	0.4	0.4		Ø 34x5 mm - Set of 6 only	SUS
SEI-KTC-9 B4	Alloy Cast Iron (Set of 6 only)	3.3	1.8	0.6	0.07	0.04	0.4	0.4	0.6	0.6		Ø 34x5 mm - Set of 6 only	SUS
SEI-KTC-9 B5	Alloy Cast Iron (Set of 6 only)	3.7	1.4	0.8	0.09	0.02	0.2	0.2	0.8	0.8		Ø 34x5 mm - Set of 6 only	SUS
SEI-KTC-9 B6	Alloy Cast Iron (Set of 6 only)	4.0	1.0	1.0	0.12	0.003	0.05	0.05	1.0	1.0		Ø 34x5 mm - Set of 6 only	SUS

BAS - SIMO Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	As	Co
BAS-SIMO 1/3	Silicon Molybdenum Irons	2.70	4.07	0.333	0.040	0.007	0.899	0.030	0.776	0.028	0.026		0.036	0.047	0.013
BAS-SIMO 1/4	Silicon Molybdenum Irons	2.57	3.95	0.329	0.031	0.01	0.913	0.017	0.699	0.027	0.024		0.028	0.002	0.014
BAS-SIMO 2/2	Silicon Molybdenum Irons	2.14	4.75	0.434	0.025	0.007	0.856	0.0189	0.484	0.01	0.013	0.006	0.026	0.039	0.0029

Analyte - Measured Values (continued)

Code	Sn	Ti	V	Size	Type
BAS-SIMO 1/3	0.048	0.007	0.007	48x42x12 mm	RM
BAS-SIMO 1/4	0.046	0.007	0.008	48x42x12 mm	RM
BAS-SIMO 2/2	0.038	0.005	0.009	48x42x12 mm	RM

CTIF - SIMO Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Mg	Co	Ti	V	Size	Type
CTIF-SIMO-1	Cast Iron	2.98	4.03	0.365	0.013	(0.0015)	0.036	0.065	0.752	0.035		0.019	(0.03)	(0.018)	(0.018)	Ø 43x5 mm, 2 pieces	RM
CTIF-SIMO-2	Cast Iron	(2.85)	3.85	0.335	0.026	(0.001)	0.038	(0.061)	1.04	0.036	1.51	0.072	(0.03)	(0.016)	(0.017)	Ø 43x5 mm, 2 pieces	RM
CTIF-SIMO-3	Cast Iron	3.18	4.02	0.61	0.053	(0.0006)	0.11	0.066	0.604	0.0325	1.15	0.013	0.0296	0.0176	0.0171	Ø 43x5 mm, 2 pieces	RM
CTIF-SIMO-4	Cast Iron	2.7	4.35	0.28	0.0211	(0.0015)	0.0845	(0.029)	0.4	0.0657	(0.038)	0.1	(0.015)	0.0171	0.0133	Ø 43x5 mm, 2 pieces	RM
CTIF-SIMO-5	Cast Iron	2.94	4.31	0.439	0.0282		0.032	0.194	0.841	0.0121			(0.013)	0.01	(0.0095)	Ø 43x5 mm, 2 pieces	RM

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CTIF - NIRM Series

		Analyte - Measured Values															
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Mg	Co	Sn	Ti	V	Size	Type
CTIF-NIMO-1	Cast Iron	3.22	2.585	0.2	0.059	(0.003)	0.0353	2.165	0.457	0.376	0.003-0.25%	0.0205	0.002	0.019	0.0169	Ø 43x5 mm, 2 pieces	RM

BAS - NIRM Series

		Analyte - Measured Values														
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ce	Mg	Nb		Size	Type
BAS-NIRM 1	Austenitic (Ni-Resist) Irons	2.05	3.15	6.72	0.055	0.005	0.246	11.8		0.2	0.018	0.021			40x37x10 mm	RM
BAS-NIRM 2-1	Austenitic (Ni-Resist) Irons	2.81	1.5	2.08	0.129	0.01	1.48	13.95		5.98	0.015	0.05			48x42x12 mm	RM
BAS-NIRM 3	Austenitic (Ni-Resist) Irons	2.51	2.21	0.51	0.208	0.096	2.43	17.8		1.0	0.007		0.09		40x37x10 mm	RM
BAS-NIRM 4	Austenitic (Ni-Resist) Irons	1.97	3.03	2.37	0.051	0.008	3.56	20.2		0.52	0.011	0.014	0.37		40x37x10 mm	RM
BAS-NIRM 5-1	Austenitic (Ni-Resist) Irons	2.95	1.5	1.01	0.103	0.005	0.51	21.7		0.21	0.016	0.055	0.15		48x42x12 mm	RM
BAS-NIRM 6	Austenitic (Ni-Resist) Irons	2.44	2.43	4.0	0.217	0.062	1.07	26.7	0.45	0.1	0.003				40x37x10 mm	RM
BAS-NIRM 7	Austenitic (Ni-Resist) Irons	2.05	3.05	0.71	0.058	0.02	3.53	32.9	0.99	0.52	0.005	0.019			40x37x10 mm	RM
BAS-NIRM 8/1	Austenitic (Ni-Resist) Irons	1.34	5.42	1.6	0.109	0.01	2.34	35.2	0.75	0.23	0.013	0.043			48x42x12 mm	RM

CTIF - NR Series

		Analyte - Measured Values												Size	Type
Code	Description	C	Si	Mn	P	S	Cr	Ni	Cu	Mg	Nb				
CTIF-NR1L	Cast Iron, Ni resist	2.5	3.0	1.34	0.125	0.1	1.74	25.87	0.49					Ø 43x5 mm, 2 pieces	RM
CTIF-NR3L	Cast Iron, Ni resist	2.99	3.05	0.72	0.088	0.052	2.97	21.58	0.26					Ø 43x5 mm, 2 pieces	RM
CTIF-NR4L	Cast Iron, Ni resist	2.41	5.89	1.495	0.155	0.01	1.403	15.9	0.758					Ø 43x5 mm, 2 pieces	RM
CTIF-NR5L	Cast Iron, Ni resist	1.77	2.99	1.207	0.037	0.083	0.27	33.89	0.48					Ø 43x5 mm, 2 pieces	RM
CTIF-NR6L	Cast Iron, Ni resist	1.76	2.07	0.7	0.031	0.063	3.49	30.37	0.02					Ø 43x5 mm, 2 pieces	RM
CTIF-NR8L	Cast Iron, Ni resist	2.89	1.7	5.19	0.054	0.03	0.165	13.33	0.075					Ø 43x5 mm, 2 pieces	RM
CTIF-NR2S	Cast Iron, Ni resist with Mg	2.32	1.43	0.53	0.062		0.51	36.3	0.21	0.003-0.25%				Ø 43x5 mm, 2 pieces	RM
CTIF-NR3S	Cast Iron, Ni resist with Mg	2.92	2.91	0.77	0.024		3.05	24.63	0.33	0.003-0.25%				Ø 43x5 mm, 2 pieces	RM
CTIF-NR4S	Cast Iron, Ni resist with Mg	2.47	4.87	1.71	0.145		1.5	18.3	0.63	0.003-0.25%				Ø 43x5 mm, 2 pieces	RM
CTIF-NR5S	Cast Iron, Ni resist with Mg	1.67	1.97	1.23	0.035		0.24	27.05	0.5	0.003-0.25%				Ø 43x5 mm, 2 pieces	RM
CTIF-NR6S	Cast Iron, Ni resist with Mg	1.82	2.44	0.99	0.019		1.06	30.75	0.03	0.003-0.25%				Ø 43x5 mm, 2 pieces	RM
CTIF-NR8S	Cast Iron, Ni resist with Mg	3.05	1.41	4.39	0.124		0.191	14.2	0.071	0.003-0.25%				Ø 43x5 mm, 2 pieces	RM
CTIF-NR2G	Cast Iron, Ni resist with Mg	2.25	1.47	0.38	0.0476	(0.003)	0.395	36.34	0.232	0.003-0.25%	0.27			Ø 43x5 mm, 2 pieces	RM
CTIF-NR4G	Cast Iron, Ni resist with Mg	2.24	5.6	1.72	0.11	(0.002)	1.4	21.3	0.64	0.003-0.25%				Ø 43x5 mm, 2 pieces	RM

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CTIF - NRCU Series

		Analyte - Measured Values												
Code	Description	C	Si	Mn	P	S	Cr	Ni	Cu	Al	N		Size	Type
CTIF-NRCU1-1B	Cast Iron, aust., Ni-resist	3.1	1.0	1.465	0.172	0.09	0.994	18.02	4.95	(0.095)			Ø 43x5 mm, 2 pieces	RM
CTIF-NRCU2	Cast Iron, aust., Ni-resist	2.48	2.07	1.078	0.113	0.049	2.05	15.85	6.5		(0.0079)		Ø 43x5 mm, 2 pieces	RM
CTIF-NRCU3	Cast Iron, aust., Ni-resist	1.94	3.12	0.6	0.046	0.016	3.5	13.3	8.05				Ø 43x5 mm, 2 pieces	RM

BAS - NCRM Series

		Analyte - Measured Values												
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V		Size	Type
BAS-NCRM 1	Nickel Chromium Irons	3.05	0.95	1.22	0.3	0.156	0.55	0.57	1.02	2.17	0.03		40x37x10 mm	RM
BAS-NCRM 2	Nickel Chromium Irons	2.97	1.82	0.95	0.068	0.119	1.99	2.1	0.36	1.67	0.16		40x37x10 mm	RM
BAS-NCRM 3	Nickel Chromium Irons	3.24	0.29	0.67	0.125	0.09	3.95	3.64	0.78	1.21	0.02		40x37x10 mm	RM
BAS-NCRM 4	Nickel Chromium Irons	2.66	2.13	0.4	0.203	0.012	7.94	5.34	0.57	0.68	0.11		40x37x10 mm	RM
BAS-NCRM 5	Nickel Chromium Irons	3.7	1.15	0.27	0.025	0.015	10.44	6.74	0.1	0.204	0.06		40x37x10 mm	RM

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NCS HS11716A

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Co	Nb	Ti	V
NCS HS11716A-1	High Chromium Cast Iron only as set of 6	1.8	2.72	0.687	0.106	0.046	32.6	0.272	0.201	0.314	0.075	0.037	0.12	0.081	0.217
NCS HS11716A-2	High Chromium Cast Iron only as set of 6	1.99	1.12	1.19	0.051	0.015	10.97	0.319	0.716	1.34	0.051	0.018	0.272	0.04	0.15
NCS HS11716A-3	High Chromium Cast Iron only as set of 6	3.35	1.42	1.25	0.056	0.046	25.83	0.662	0.461	0.877	0.141	0.357	0.068	0.188	0.447
NCS HS11716A-4	High Chromium Cast Iron only as set of 6	2.63	0.572	2.09	0.021	0.05	14.64	1.49	3.51	1.64	0.139	0.124	0.261	0.086	0.086
NCS HS11716A-5	High Chromium Cast Iron only as set of 6	2.27	0.713	1.4	0.186	0.046	18.28	2.16	2.42	0.884	0.044	0.031	0.437	0.028	0.607
NCS HS11716A-6	High Chromium Cast Iron only as set of 6	3.02	1.72	1.76	0.249	0.093	23.76	0.811	1.29	0.617	0.18	0.206	0.128	0.114	0.479

Analyte - Measured Values (continued)

Code	W	Size	Type
NCS HS11716A-1	0.29	Ø 33x21 mm - Set of 6 only	CRM
NCS HS11716A-2	0.352	Ø 33x21 mm - Set of 6 only	CRM
NCS HS11716A-3	0.519	Ø 33x21 mm - Set of 6 only	CRM
NCS HS11716A-4	0.025	Ø 33x21 mm - Set of 6 only	CRM
NCS HS11716A-5	0.071	Ø 33x21 mm - Set of 6 only	CRM
NCS HS11716A-6	0.18	Ø 33x21 mm - Set of 6 only	CRM

BAS - CRRM Serie

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Pb	Ti	V	Size	Type
BAS-CRRM1/1	High Chromium Irons	1.83	1.53	1.45	0.132	0.099	11.18	2.03	3.05	2.01	0.117		0.096	0.04	40x37x10 mm	RM
BAS-CRRM2/1	High Chromium Irons	1.92	1.18	1.11	0.097	0.079	14.13	1.61	2.44	1.59	0.054		0.07	0.063	40x37x10 mm	RM
BAS-CRRM 3	High Chromium Irons	2.68	0.94	0.84	0.054	0.05	18.28	1.27	1.8	1.22		0.008			40x37x10 mm	RM
BAS-CRRM3/1	High Chromium Irons	2.42	0.82	0.85	0.068	0.059	17.48	1.28	1.65	1.21	0.084		0.021	0.022	40x37x10 mm	RM
BAS-CRRM4/2	High Chromium Irons	2.93	0.45	0.58	0.049	0.042	21.93	0.58	1.15	0.53	<0.005		0.008	0.11	48x42x12 mm	RM
BAS-CRRM5/1	High Chromium Irons	3.46	0.25	0.32	0.029	0.019	29.09	0.29	0.54	0.23	0.17		0.026	0.063	40x37x10 mm	RM
BAS-CRRM5-2	High chromium iron	3.43	0.2	0.3	0.029	0.018	30.35	0.36	0.63	0.22	0.15		0.009	0.11	48x42x12 mm	RM

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VS - CHG Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Mg	As	Sb	Sn
VS-CHG1-5	Cast Iron (Chill cast; white structure)	3.38	1.04	1.09	0.16	0.029	(0.08)			(0.04)			(0.002)		
VS-CHG1-7	Cast Iron	3.61		1.12	0.184	0.038	0.017			0.041					
VS-CHG2-7	Cast Iron	3.93		0.456	0.513	0.078	0.060			0.082					
VS-CHG3-7	Cast Iron	3.54		0.387	0.037	0.053	0.100			0.123					
VS-CHG4-7	Cast Iron	3.24		1.42	0.030	0.024	0.155			0.199					
VS-CHG5-7	Cast Iron	3.51		0.60	0.104	0.036	0.307			0.037					
VS-CHG6-7	Cast Iron	2.65		0.83	0.54	0.027	0.241			0.34					
VS-CHG24	Cast Iron (Chill cast; white structure)	3.05	2.5	0.245	0.26	0.0048	0.031	0.87	0.031	0.1	0.007	0.015		0.009	0.077
VS-CHG25	Cast Iron (Chill cast; white structure)	3.74	1.46	0.68	0.009	0.0035	0.25	0.38	0.253	0.79	0.009	0.037		0.052	0.017
VS-CHG26	Cast Iron (Chill cast; white structure)	(2.9)	2.98	0.126	0.123	0.0041	0.05	1.52	0.075	0.014	0.038	0.044			0.031
VS-CHG27	Cast Iron (Chill cast; white structure)	3.53	1.82	1.21	0.044	0.029	0.162	0.022	0.147	0.348	0.008			0.029	0.115
VS-CHG28	Cast Iron (Chill cast; white structure)	3.29	2.22	0.414	0.025	0.015	0.127	0.166	0.0024	1.29	0.015	0.01		0.015	0.0017
VS-CHG35	Cast Iron (Chill cast; white structure)	3.34	0.617	1.23	0.102	0.021	0.233	2.15	0.027	0.09					
VS-CHG36	Cast Iron (Chill cast; white structure)	2.94	1.5	0.454	0.232	0.036	0.476	0.542	0.406	0.7					
VS-CHG37	Cast Iron (Chill cast; white structure)	2.49	2.03	0.92	0.038	0.046	0.82	0.9	0.55	0.512					
VS-CHG38	Cast Iron (Chill cast; white structure)	2.43	2.3	0.302	0.386	0.084	1.98	0.162	0.046	1.2					
VS-CHG39	Cast Iron (Chill cast; white structure)	3.01	1.45	0.82	0.304	0.088	1.08	1.09	0.113	0.414					
VS-CHG40	Cast Iron (Chill cast; white structure)	2.59	1.6	1.56	0.059	0.019	1.47	1.61	0.229	0.98					
VS-CHG44	High Alloy Cast Iron	1.24	1.5	0.87	(1.2)	0.076	25.44	0.175	0.035	2.27					

Analyte - Measured Values (continued)

Code	Ti	V	Size	Type
VS-CHG1-5	0.005	0.05	Ø 40x40 mm	CRM
VS-CHG1-7	0.014	0.006	Ø 35x40 mm	CRM
VS-CHG2-7	0.080	0.049	Ø 35x40 mm	CRM
VS-CHG3-7	0.125	0.096	Ø 35x40 mm	CRM
VS-CHG4-7	0.10	0.169	Ø 35x40 mm	CRM
VS-CHG5-7		0.441	Ø 35x40 mm	CRM
VS-CHG6-7	0.028	0.130	Ø 35x40 mm	CRM
VS-CHG24	0.06	0.0067	30x35x25mm	CRM
VS-CHG25	0.017	0.086	30x35x25mm	CRM
VS-CHG26	0.0026	0.04	30x35x25mm	CRM
VS-CHG27	0.056	0.16	30x35x25mm	CRM
VS-CHG28	0.0041	0.002	30x35x25mm	CRM
VS-CHG35	0.022	0.043	Ø 35x40 mm	CRM
VS-CHG36	0.027	0.086	Ø 35x40 mm	CRM
VS-CHG37	0.092	0.227	Ø 35x40 mm	CRM
VS-CHG38	0.105	0.119	Ø 35x40 mm	CRM
VS-CHG39	0.168	0.274	Ø 35x40 mm	CRM
VS-CHG40	0.18	0.325	Ø 35x40 mm	CRM
VS-CHG44	0.104	0.079	bottom 32-36 mm, height 15-20mm	CRM

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MBH - 11X 0331 Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Co	Nb	Pb	Sn
MBH-11X 0331.1 J	Corrosion Resistant Iron	2.81	2.5	1.65	0.069	0.133	0.607	12.41	0.12	7.57	0.122	0.112	0.149	0.033	0.044
MBH-11X 0331.2 K	Corrosion Resistant Iron	2.64	2.32	1.272	0.049	0.119	1.025	14.26	0.0644	6.47	0.191	0.161	0.104	0.0205	0.0205
MBH-11X 0331.3 G	Corrosion Resistant Iron	2.27	1.79	0.613	0.0339	0.049	2.014	17.23	0.0518	6.02	(0.116)	0.108		0.0247	0.0127
MBH-11X 0331.5 C	Corrosion Resistant Iron	2.73		0.893	0.164	0.217	0.582	14.52	0.117	7.74	0.018			0.0056	0.121

Analyte - Measured Values (continued)

Code	Ti	V	Size	Form	Type
MBH-11X 0331.1 J	0.11		Ø 40x13 mm	CC	prov.
MBH-11X 0331.2 K	0.14	0.0158	Ø 40x13 mm	CC	prov.
MBH-11X 0331.3 G	0.085	0.029	Ø 40x13 mm	CC	CRM
MBH-11X 0331.5 C			Ø 40x13 mm	CC	CRM

MBH - 11X Other Alloyed Irons

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Co	Nb	Pb	Sn	V
MBH-11X 15294 U	Cast iron with chromium	3.16	0.374	0.59	0.081	0.051	27.53	1.28	0.755	0.22	0.237		0.014	0.0633	0.144
MBH-11X 15295 Q	Cast iron with chromium ?40x15mm	2.430	1.032	1.126	0.078	0.081	25.64	0.331	0.486	0.259	0.494	0.070	0.0093	0.0455	(0.169)
MBH-11X 15309 S	Iron with Chrome	3.0	1.4	1.5	0.04	0.06	23.2	0.9	0.25	0.5	0.03				0.06
MBH-11X 15310 A	Iron with Chrome	2.71	0.892	1.45	0.051	0.0278	21.22	5.66	0.98	2.64	0.0709				0.071
MBH-11X 20001 J	Corrosion Resistant Iron	2.9	1.01	0.58	0.005	0.143	1.5	21.4		0.01					
MBH-11X 20002 J	Corrosion Resistant Iron	2.67	2.04	1.06	0.06	0.045	2.03	20.0		0.3					
MBH-11X 20003 K	Corrosion Resistant Iron	2.91	3.03	1.53	0.174	0.007	2.53	17.8		0.52					

Analyte - Measured Values (continued)

Code	W	Size	Form	Type
MBH-11X 15294 U	0.35	Ø 40x15 mm	CC	CRM
MBH-11X 15295 Q	0.219	Ø 40x15 mm	CC	CRM
MBH-11X 15309 S	0.015	Ø 40x15 mm	CC	prov.
MBH-11X 15310 A	0.137	Ø 40x15 mm	CC	CRM
MBH-11X 20001 J		Ø 40x15 mm	C	RM
MBH-11X 20002 J		Ø 40x15 mm	C	RM
MBH-11X 20003 K		Ø 40x15 mm	C	RM

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MBH - 11X S Series

		Analyte - Measured Values											
Code	Description	C	Si	Mn	P	S	Cr	Ni	Cu		Size	Form	Type
MBH-11X S1 CR3 J	Corrosion resistant iron	2.91	1.07	0.861	0.072	0.023	1.61	14.53	9.01		Ø 40x15 mm	CC	CRM
MBH-11X S1 CR5 G	Corrosion resistant iron	2.58	1.494	1.315	0.114	0.033	3.74	17.45	3.9		Ø 40x10 mm	CC	CRM
MBH-11X S/2 CR1 E	Corrosion Resistant Iron	2.83	2.85	1.68	0.31	0.011	2.48	16.5	0.02		Ø 40x15 mm	CC	RM
MBH-11X S/2 CR4 D	Corrosion Resistant Iron	2.82	2.59	0.97	0.049	0.01	1.1	20.7	0.24		Ø 40x15 mm	CC	RM
MBH-11X S/3 CR1 D	Corrosion Resistant Iron	2.61	2.52	0.7	0.046	0.011	0.15	31.7	0.19		Ø 40x15 mm	CC	RM
MBH-11X S/3 CR2 C	Corrosion Resistant Iron	2.3	2.59	0.85	0.045	0.01	2.62	31	0.21		Ø 40x15 mm	CC	RM
MBH-11X S/3 CR3 B	Corrosion Resistant Iron	2.49	2.44	0.66	0.053	0.05	4.06	29.4	0.23		Ø 40x15 mm	CC	RM

NCS HS13705

		Analyte - Measured Values														
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	B	Ti	V	W	Size	Type
NCS HS13705-1	Alloy Cast Iron - just available as set of 7	1.81	3.2	1.21	0.0233	0.011	3.08	4.67	0.627	0.68	0.0031	0.268	0.507	0.207	Ø 30x30 mm - Set of 7 only	CRM
NCS HS13705-2	Alloy Cast Iron - just available as set of 7	2.46	2.59	1.72	0.472	0.0185	0.227	1.92	0.191	0.206	0.0065	0.354	0.406	0.404	Ø 30x30 mm - Set of 7 only	CRM
NCS HS13705-3	Alloy Cast Iron - just available as set of 7	2.97	1.99	1.48	0.313	0.0224	0.485	2.44	0.38	0.432	0.015	0.462	0.308	0.303	Ø 30x30 mm - Set of 7 only	CRM
NCS HS13705-4	Alloy Cast Iron - just available as set of 7	3.21	1.44	0.142	1.57	0.121	1.47	3.02	0.0679	1.24	0.031	0.156	0.2013	0.0333	Ø 30x30 mm - Set of 7 only	CRM
NCS HS13705-5	Alloy Cast Iron - just available as set of 7	3.33	1.02	0.947	0.142	0.0556	1.12	0.971	0.751	0.753	0.059	0.104	0.156	0.169	Ø 30x30 mm - Set of 7 only	CRM
NCS HS13705-6	Alloy Cast Iron - just available as set of 7	3.65	0.551	0.48	0.0582	0.0732	1.96	0.446	1.37	1.03	0.0846	0.116	0.0746	0.111	Ø 30x30 mm - Set of 7 only	CRM
NCS HS13705-7	Alloy Cast Iron - just available as set of 7	3.99	0.284	1.98	0.211	0.0375	0.208	0.0713	2.2	0.0609	0.0124	0.0216	0.0321	0.447	Ø 30x30 mm - Set of 7 only	CRM

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NCS HS92703

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	B	Nb	Ti	V
NCS HS92703-1	High Chromium Iron, 30mm x 30mm, just available as set of 7	3.31	0.098	1.54	0.369	0.0047	1.17	2.57	1.47	0.449	0.177	0.018		0.952
NCS HS92703-2	High Chromium Iron, 30mm x 30mm, just available as set of 7	2.96	0.491	1.24	0.211	0.0077	9.75	1.99	2.17	1.57	0.142	0.182	0.3	0.669
NCS HS92703-3	High Chromium Iron, 30mm x 30mm, just available as set of 7	2.4	0.821	1.06	0.115	0.015	13.3	1.55	0.869	0.953	0.102	0.149	0.171	0.482
NCS HS92703-4	High Chromium Iron, 30mm x 30mm, just available as set of 7	2.0	1.16	0.803	0.09	0.025	18.28	1.07	0.598	0.738	0.086	0.071	0.087	0.38
NCS HS92703-5	High Chromium Iron, 30mm x 30mm, just available as set of 7	1.48	1.37	0.579	0.041	0.058	22.55	0.708	0.359	0.583	0.076	0.022	0.056	0.314
NCS HS92703-6	High Chromium Iron, 30mm x 30mm, just available as set of 7	1.16	1.44	0.302	0.033	0.086	25.76	0.289	0.15	0.845	0.055	0.014	0.019	0.146
NCS HS92703-7	High Chromium Iron, 30mm x 30mm, just available as set of 7	3.13	2.48	0.201	0.024	0.116	31.26	0.129	0.086	0.154	0.015	0.01	0.033	0.087

Analyte - Measured Values (continued)

Code	W	Size	Type
NCS HS92703-1	0.015	Ø 30x30 mm - Set of 7 only	CRM
NCS HS92703-2	1.99	Ø 30x30 mm - Set of 7 only	CRM
NCS HS92703-3	1.57	Ø 30x30 mm - Set of 7 only	CRM
NCS HS92703-4	1.05	Ø 30x30 mm - Set of 7 only	CRM
NCS HS92703-5	0.694	Ø 30x30 mm - Set of 7 only	CRM
NCS HS92703-6	0.37	Ø 30x30 mm - Set of 7 only	CRM
NCS HS92703-7	0.175	Ø 30x30 mm - Set of 7 only	CRM

NCS - Cast Iron

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ce	Mg	B	Sb	Sn
NCS HS92744	Alloy Cast Iron	3.58	1.74	0.44	0.034	0.018	0.5	0.59	0.18	0.26		0.039	0.019		0.0045
NCS HS92745	Cast Iron	3.69	1.5	0.49	0.063	0.049	0.47	0.23	0.22	0.34				0.12	
NCS HS92746	Cast Iron	3.36	2.44	0.231	0.04	0.006	0.16	2.24			0.006	0.033			

Analyte - Measured Values (continued)

Code	Ti	V	Size	Type
NCS HS92744	0.055	0.2	Ø 30mm x 27 mm	CRM
NCS HS92745		0.11	Ø 30mm x 30 mm	CRM
NCS HS92746	0.073		Ø 30mm x 30 mm	CRM

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BS - Y

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	B	N	Nb	Ti	V
BS-Y451052-2	High Chromium Cast Iron	2.96	0.491	1.24	0.211	0.0077	9.75	1.99	2.17	1.57	0.142		0.182	0.3	0.669
BS-Y451052-3	High Chromium Cast Iron	2.4	0.821	1.06	0.115	0.015	13.3	1.55	0.869	0.953	0.102		0.149	0.171	0.482
BS-Y451052-4	High Chromium Cast Iron	2.0	1.16	0.803	0.09	0.025	18.28	1.07	0.598	0.738	0.086		0.071	0.087	0.38
BS-Y451052-5	High chromium cast iron	1.48	1.37	0.579	0.041	0.058	22.55	0.708	0.359	0.583	0.076		0.022	0.056	0.314
BS-Y451052-6	High Chromium Cast Iron	1.16	1.44	0.302	0.033	0.086	25.76	0.289	0.15	0.845	0.055		0.014	0.019	0.146
BS-Y451052-7	High Chromium Cast Iron	3.13	2.48	0.201	0.024	0.116	31.26	0.129	0.086	0.154	0.015		0.01	0.033	0.087
BS-Y451054-2	High Chromium Cast Iron	3.0	0.56	1.42	0.133	0.016	7.23	1.43	2.48	0.324				0.015	0.88
BS-Y451054-3	High Chromium Cast Iron	2.73	0.99	1.09	0.105	0.036	12.97	1.2	2.08	0.451				0.045	0.66
BS-Y451054-4	High chromium cast iron	2.31	1.4	0.725	0.071	0.046	17.6	0.914	1.44	0.739				0.084	0.46
BS-Y451054-5	High Chromium Cast Iron	1.83	1.8	0.466	0.043	0.091	23.4	0.517	0.739	0.904				0.068	0.26
BS-Y451054-6	High Chromium Cast Iron	1.45	2.38	0.254	0.024	0.123	28.96	0.216	0.213	1.15				0.084	0.13
BS-YTSK200	Cast Iron	2.11	0.17	0.82	0.319	0.022	4.97	3.22	3.5	1.86		0.021			0.6
BS-YTSK201	High Alloy Cast Iron	2.56	0.66	1.07	0.253	0.023	10.14	2.44	2.56	1.53		0.029			0.42
BS-YTSK202	High Alloy Cast Iron	1.81	2.0	1.16	0.201	0.057	15.42	1.91	2.2	1.1		0.075			0.33
BS-YTSK203	High Alloy Cast Iron	1.23	0.46	0.68	0.117	0.044	19.93	1.55	1.58	0.75		0.094			0.22
BS-YTSK204	High Alloy Cast Iron	0.91	1.0	0.34	0.078	0.063	25.37	0.97	0.95	0.53		0.114			0.14
BS-YTSK205	High Alloy Cast Iron	3.03	1.65	0.16	0.041	0.088	30.35	0.37	0.22	0.35		0.108			0.077

Analyte - Measured Values (continued)

Code	W	Size	Type
BS-Y451052-2	1.99	Ø 30x30 mm	CRM
BS-Y451052-3	1.57	Ø 30x30 mm	CRM
BS-Y451052-4	1.05	Ø 30x30 mm	CRM
BS-Y451052-5	0.694	Ø 30x30 mm	CRM
BS-Y451052-6	0.37	Ø 30x30 mm	CRM
BS-Y451052-7	0.175	Ø 30x30 mm	CRM
BS-Y451054-2		Ø 30x30 mm	CRM
BS-Y451054-3		Ø 30x30 mm	CRM
BS-Y451054-4		Ø 30x30 mm	CRM
BS-Y451054-5		Ø 30x30 mm	CRM
BS-Y451054-6		Ø 30x30 mm	CRM
BS-YTSK200		Ø 30x35 mm	CRM
BS-YTSK201		Ø 30x35 mm	CRM
BS-YTSK202		Ø 30x35 mm	CRM
BS-YTSK203		Ø 30x35 mm	CRM
BS-YTSK204		Ø 30x35 mm	CRM
BS-YTSK205		Ø 30x35 mm	CRM

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CKD - 25x Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	Co	Nb
CKD-250	Cast Iron, aust., nod.	1.12	0.55	0.32	0.015	0.024	0.61	17.7	0.005	0.22	-0.01	0.00	0.000	0.085	0.00
CKD-251	Cast Iron, aust., nod.	2.25		1.97	0.015	0.015	1.07	19.7	0.12	0.38	(0.02)	0.017	0.022	0.09	0.1
CKD-253	Cast Iron, aust., nod.	2.45		0.74	0.059	0.008	2.95	23.6	0.01	0.29	0.035	0.018	0.038	0.105	
CKD-254	Cast Iron, aust., nod.	2.78		4.5	0.043	0.018	0.24	14.3	0.41	0.11	0.05	0.039	0.058	0.06	0.26

Analyte - Measured Values (continued)

Code	Pb	Sn	Ti	V	Size	Type
CKD-250	0.0	(0.009)	0.0	0.0	38x38x23 mm	CRM
CKD-251	(0.009)	(0.01)	(0.005)	(0.02)	38x38x23 mm	CRM
CKD-253		0.005	0.005	0.02	38x38x23 mm	CRM
CKD-254	0.012	0.02	0.005	0.005	38x38x23 mm	CRM

SEI-KTC-10

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Mg	Size	Type
SEI-KTC-10 M-1	Ductile Cast Iron (Set of 5 only)	3.4	2.5	0.1	0.015	0.002	0.05	Ø 45x5 mm - Set of 5 only	SUS
SEI-KTC-10 M-2	Ductile Cast Iron (Set of 5 only)	3.4	2.5	0.1	0.015	0.002	0.04	Ø 45x5 mm - Set of 5 only	SUS
SEI-KTC-10 M-3	Ductile Cast Iron (Set of 5 only)	3.4	2.5	0.1	0.015	0.002	0.03	Ø 45x5 mm - Set of 5 only	SUS
SEI-KTC-10 M-4	Ductile Cast Iron (Set of 5 only)	3.4	2.5	0.1	0.015	0.002	0.02	Ø 45x5 mm - Set of 5 only	SUS
SEI-KTC-10 M-5	Ductile Cast Iron (Set of 5 only)	3.4	2.5	0.1	0.015	0.002	0.01	Ø 45x5 mm - Set of 5 only	SUS

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SEI-KTC-11

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	B	Bi
SEI-KTC-11 D-1A	Ductile Cast Iron (Set of 10 only)	3.2	3.31	0.13	0.028	0.005			0.11	0.19	0.087	0.035	0.046	0.028	
SEI-KTC-11 D-2A	Ductile Cast Iron (Set of 10 only)	3.47	2.99	0.5	0.016	0.001		0.41	0.22	0.04	0.074	0.011	0.053	0.055	
SEI-KTC-11 D-3A	Ductile Cast Iron (Set of 10 only)	3.6	2.22	0.42	0.033	0.017		0.31	0.45		0.012		0.022	0.01	
SEI-KTC-11 D-4A	Ductile Cast Iron (Set of 10 only)	3.19	2.71	0.71	0.02	0.006	0.21	0.34	0.021		0.053	0.008	0.048	0.12	
SEI-KTC-11 D-5A	Ductile Cast Iron (Set of 10 only)	3.78	2.47	0.24	0.044	0.014	0.02		0.32		0.013		0.02	0.001	0.001
SEI-KTC-11 D-6A	Ductile Cast Iron (Set of 10 only)	3.93	1.64	0.37	0.071	0.033	0.31	0.1		0.31	0.007		0.015		0.005
SEI-KTC-11 D-7A	Ductile Cast Iron (Set of 10 only)	3.99	2.02	0.29	0.06	0.021		0.21	0.062	0.11	0.014		0.013		0.011
SEI-KTC-11 D-8A	Ductile Cast Iron (Set of 10 only)	2.98	2.87	0.2	0.05	0.037	0.29	0.01	0.008	0.52	0.11	0.064	0.021		0.005
SEI-KTC-11 D-9A	Ductile Cast Iron (Set of 10 only)	3.2	2.48	0.84	0.004	0.014	0.11		0.004	0.01	0.1	0.092	0.007		
SEI-KTC-11 D-10A	Ductile Cast Iron (Set of 10 only)	2.79	2.4	0.02	0.008	0.011	0.4			0.4	0.029		0.003	0.087	0.003

Analyte - Measured Values (continued)

Code	Ca	Pb	Sb	Sn	Ti	V	Zn		Size	Type
SEI-KTC-11 D-1A		0.001	0.062			0.1	0.009		Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-11 D-2A			0.094	0.004	0.1	0.2	0.002		Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-11 D-3A			0.024	0.014	0.24		0.018		Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-11 D-4A	0.0018	0.004	0.009	0.44		0.25			Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-11 D-5A	0.0005	0.007	0.16		0.18		0.029		Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-11 D-6A	0.0005	0.016		0.054	0.047	0.15			Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-11 D-7A		0.009			0.12	0.055	0.051		Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-11 D-8A		0.009	0.21	0.3		0.009			Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-11 D-9A	0.003	0.037		0.2		0.37			Ø 34x5 mm - Set of 10 only	SUS
SEI-KTC-11 D-10A	0.0035	0.026		0.089		0.003			Ø 34x5 mm - Set of 10 only	SUS

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NIST

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	B	Co
NIST-C1137A	White Cast Iron	2.86	1.15	0.52	0.087	0.017	0.643	2.17	0.86	0.192	(0.007)	0.016	0.032		
NIST-C2424	Ductile Iron C	2.68	3.37	0.268	0.041	0.024	0.13	0.061	0.019	0.125	(<0.01)	0.0046	0.006	(0.002)	(0.05)

Analyte - Measured Values (continued)

Code	La	Ti	V	Size	Type
NIST-C1137A		(0.04)	0.019	Ø 32x19 mm	CRM
NIST-C2424	0.0011	0.05	0.083	Ø 32x19 mm	CRM

NCS HS11722

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	La	Sb
NCS HS11722-1	Ductile Cast Iron - just available as set of 6	2.12	3.88	0.26	0.38	0.004	0.04	0.026	0.77	0.21	0.17	0.2	0.07	0.06	0.003
NCS HS11722-2	Ductile Cast Iron - just available as set of 6	2.46	1.44	1.09	0.074	0.035	0.083	0.025	0.56	1.51	0.07	0.062	0.041	0.018	0.052
NCS HS11722-3	Ductile Cast Iron - just available as set of 6	3.62	1.85	0.6	0.049	0.012	0.069	0.017	0.38	0.76	0.094	0.11	0.06	0.045	0.094
NCS HS11722-4	Ductile Cast Iron - just available as set of 6	3.24	2.84	0.46	0.049	0.016	0.093	0.078	0.16	0.24	0.083	0.004	0.033	0.002	0.038
NCS HS11722-5	Ductile Cast Iron - just available as set of 6	2.7	2.03	0.77	0.16	0.087	0.045	0.023	0.12	1.23	0.13	(0.003)	0.004	(0.0005)	0.12
NCS HS11722-6	Ductile Cast Iron - just available as set of 6	4.04	0.88	0.89	0.29	0.14	0.13	0.035	0.079	0.61	0.044	(0.003)	0.007	(0.0005)	0.2

Analyte - Measured Values (continued)

Code	Sn	Ti	V	Size	Type
NCS HS11722-1	0.3	0.37	0.031	Ø 36x15 mm - Set of 6 only	CRM
NCS HS11722-2	0.24	0.143	0.067	Ø 36x15 mm - Set of 6 only	CRM
NCS HS11722-3	0.18	0.13	0.1	Ø 36x15 mm - Set of 6 only	CRM
NCS HS11722-4	0.09	0.082	0.11	Ø 36x15 mm - Set of 6 only	CRM
NCS HS11722-5	0.065	0.2	0.3	Ø 36x15 mm - Set of 6 only	CRM
NCS HS11722-6	0.016	0.053	0.5	Ø 36x15 mm - Set of 6 only	CRM

MBH - 11X SG Series

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Cu	Al	Mg	As	Ti	Zn	Size	Form	Type
MBH-11X SG1 A	Cast Iron - Spheroidal Graphite	3.53	2.96	0.278	0.0363	0.0095	0.0299	0.042	0.0194	0.0187	0.04	0.0021	0.015	0.041	Ø 50x15 mm	CW	CRM
MBH-11X SG2 A	Cast Iron - Spheroidal Graphite	3.48	3.03	0.297	0.0353	0.0075	0.0304	0.0263	0.0245	0.0238	0.055	0.0022	0.0146	0.04	Ø 50x15 mm	CW	CRM

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BS - Ductile Irons

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Mg	As	B	Ca
BS-286AB	Cast Iron Disc with Mg: 0.033%	3.24	2.03	0.74	0.201	0.0162	0.165	1.36	0.258	0.341	(0.009)	0.033	(0.01)	0.0085	(0.001)
BS-286AC	Cast Iron Disc with Mg: 0.034%	3.24	2.03	0.74	0.201	0.0162	0.165	1.36	0.258	0.341	(0.009)	0.034	(0.01)	0.0085	(0.001)
BS-286AD	Cast Iron Disc with Mg: 0.035%	3.24	2.03	0.74	0.201	0.0162	0.165	1.36	0.258	0.341	(0.009)	0.035	(0.01)	0.0085	(0.001)
BS-286AE	Cast Iron Disc with Mg: 0.036%	3.24	2.03	0.74	0.201	0.0162	0.165	1.36	0.258	0.341	(0.009)	0.036	(0.01)	0.0085	(0.001)
BS-286AF	Cast Iron Disc with Mg: 0.037%	3.24	2.03	0.74	0.201	0.0162	0.165	1.36	0.258	0.341	(0.009)	0.037	(0.01)	0.0085	(0.001)
BS-291CB	Cast iron with Mg	3.11	2.4	0.527	0.0266	0.0182	0.04	0.259	0.0044	0.211	(0.01)	0.04	(0.004)	0.0009	(0.001)
BS-291CC	Cast iron with Mg	3.11	2.4	0.527	0.0266	0.0182	0.04	0.259	0.0044	0.211	(0.01)	0.041	(0.004)	0.0009	(0.001)
BS-291CD	Cast iron with Mg	3.11	2.4	0.527	0.0266	0.0182	0.04	0.259	0.0044	0.211	(0.01)	0.042	(0.004)	0.0009	(0.001)
BS-291DD	Cast Iron Disc with Mg: 0.039%	3.35	2.32	0.456	0.0216	0.0156	0.159	0.17	0.022	0.189	0.0089	0.039	0.0017	0.0089	0.0012
BS-291DE	Cast Iron Disc with Mg: 0.040%	3.35	2.32	0.456	0.0216	0.0156	0.159	0.17	0.022	0.189	0.0089	0.04	0.0017	0.0089	0.0012
BS-291DF	Cast Iron Disc with Mg: 0.041%	3.35	2.32	0.456	0.0216	0.0156	0.159	0.17	0.022	0.189	0.0089	0.041	0.0017	0.0089	0.0012
BS-291DG	Cast Iron Disc with Mg: 0.042%	3.35	2.32	0.456	0.0216	0.0156	0.159	0.17	0.022	0.189	0.0089	0.042	0.0017	0.0089	0.0012
BS-291DH	Cast Iron Disc with Mg: 0.043%	3.35	2.32	0.456	0.0216	0.0156	0.159	0.17	0.022	0.189	0.0089	0.043	0.0017	0.0089	0.0012
BS-WI-1	White Cast Iron	1.75	1.9	0.24	0.051	0.114	0.048	0.053	0.0103	0.027	0.075	0.0009	0.0067	0.0032	0.0005
BS-WI-2	White Cast Iron	3.61	0.52	0.80	0.22	0.056	0.229	0.254	0.219	0.0124	0.0192	(0.0002)	0.0016	0.0008	(0.00013)

Analyte - Measured Values (continued)

Code	Co	Fe	N	Nb	O	Pb	Sb	Sn	Ti	V	W	Zr		Size	Type
BS-286AB	(0.004)	[91.4]	(0.006)	(0.003)	(0.04)			(0.004)	0.054	0.151	(0.008)	(0.007)		Ø ~35x ~30 mm	CRM
BS-286AC	(0.004)	[91.4]	(0.006)	(0.003)	(0.04)			(0.004)	0.054	0.151	(0.008)	(0.007)		Ø ~35x ~30 mm	CRM
BS-286AD	(0.004)	[91.4]	(0.006)	(0.003)	(0.04)			(0.004)	0.054	0.151	(0.008)	(0.007)		Ø ~35x ~30 mm	CRM
BS-286AE	(0.004)	[91.4]	(0.006)	(0.003)	(0.04)			(0.004)	0.054	0.151	(0.008)	(0.007)		Ø ~35x ~30 mm	CRM
BS-286AF	(0.004)	[91.4]	(0.006)	(0.003)	(0.04)			(0.004)	0.054	0.151	(0.008)	(0.007)		Ø ~35x ~30 mm	CRM
BS-291CB	(0.005)	[93.2]		(0.003)		(0.001)	(0.01)	0.131	0.0173	0.0081	(0.005)	(0.002)		Ø 35x30 mm	CRM
BS-291CC	(0.005)	[93.2]		(0.003)		(0.001)	(0.01)	0.131	0.0173	0.0081	(0.005)	(0.002)		Ø 35x30 mm	CRM
BS-291CD	(0.005)	[93.2]		(0.003)		(0.001)	(0.01)	0.131	0.0173	0.0081	(0.005)	(0.002)		Ø 35x30 mm	CRM
BS-291DD	0.0062	[93.1]		0.0024		0.0009	0.0024	0.0019	0.0265	0.013	(0.002)	0.0017		Ø ~35x ~30 mm	CRM
BS-291DE	0.0062	[93.1]		0.0024		0.0009	0.0024	0.0019	0.0265	0.013	(0.002)	0.0017		Ø ~35x ~30 mm	CRM
BS-291DF	0.0062	[93.1]		0.0024		0.0009	0.0024	0.0019	0.0265	0.013	(0.002)	0.0017		Ø ~35x ~30 mm	CRM
BS-291DG	0.0062	[93.1]		0.0024		0.0009	0.0024	0.0019	0.0265	0.013	(0.002)	0.0017		Ø ~35x ~30 mm	CRM
BS-291DH	0.0062	[93.1]		0.0024		0.0009	0.0024	0.0019	0.0265	0.013	(0.002)	0.0017		Ø ~35x ~30 mm	CRM
BS-WI-1	0.0074	[95.5]		0.027		0.115		0.0081	0.02	0.008	0.185	0.0034		Ø 35x30 mm	CRM
BS-WI-2	0.0118	(93.6)		0.128		0.013	0.023	0.0042	0.089	0.215	0.023	0.0045		Ø 35x30 mm	CRM

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Complex Alloyed

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	As	B
BS-CC11	Cast Iron, complex alloyed	3.0	1.92	1.18	0.022	(0.024)	0.06	0.064	0.011	0.14	0.029	(0.001)	(0.013)	0.006	0.0012
BS-CC14	Cast Iron, complex alloyed	(4.04)	0.64	(0.01)	0.016	0.003	0.031	0.074	(0.003)	0.021	0.006	(0.002)	(0.024)	(<0.001)	(0.0003)

Analyte - Measured Values (continued)

Code	Bi	Ca	Co	La	Pb	Sb	Sn	Te	Ti	V	W	Zr		Size	Type
BS-CC11	(<0.0005)	0.0002	0.021	(0.001)	0.0007	0.14	0.045	(0.002)	0.011	0.016	(0.002)	(0.002)		Ø 33x19 mm	RM
BS-CC14	(<0.0005)	0.0011	0.036	(0.0007)	0.0002	(0.001)	0.002	0.005	0.004	0.021	(0.003)	(0.002)		Ø 33x19 mm	RM

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Grey Iron

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	As	Co	Sb	Sn
BS-20E	Cast Iron - Gray	3.24	2.29	0.8	0.042	0.044	0.088	0.156	0.042	0.23	0.006	(0.003)	0.006	(<0.002)	0.093
BS-20G	Cast Iron - Gray	3.33	3.02	0.58	0.028	0.029	0.086	0.38	0.19	0.54	0.008	0.004	0.022	(<0.001)	0.12
BS-20K	Cast Iron - Gray	3.21	2.47	0.68	0.06	0.025	0.117	0.28	0.21	0.56	0.004	0.004	0.013		0.058
BS-20P	Cast Iron - Gray	3.22	2.62	0.63	0.032	0.044	0.079	0.143	0.033	0.067	0.008	(0.004)	0.018	(<0.001)	0.099
BS-20R	Cast Iron - Gray	3.25	2.72	0.62	0.047	0.034	0.094	0.096	0.053	0.35	0.005	0.004	0.006	(<0.001)	0.104
BS-20W	Cast Iron - Gray	3.27	2.64	0.62	0.045	0.036	0.092	0.082	0.054	0.29	0.004	0.004	0.005	(<0.001)	0.086

Analyte - Measured Values (continued)

Code	Ti	V	Size	Type
BS-20E	0.017	0.007	Ø 47x13 mm	RM
BS-20G	0.012	0.018	Ø 47x13 mm	RM
BS-20K	0.019	0.013	Ø 50x13 mm	RM
BS-20P	0.018	0.017	Ø 44x13 mm	RM
BS-20R	0.015	0.007	Ø 47x13 mm	RM
BS-20W	0.015	0.007	Ø 47x13 mm	RM

These standards contain free graphite. Extended pre-burn time may be needed to normalise analysis for optical emission (arc/spark) users.

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IARM-SUS

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Mg	As	B	Bi
IARM-215A-G3	Cast Iron, SUS, QA 21	3.5	2.1	1.3	0.3	0.13	0.6	0.9	0.5	0.6	0.037				
IARM-216A-G3	Cast Iron, SUS, QA 22	3.0	3.0	0.3	0.026	0.001	1.5	2.0	0.004	0.08	0.06	0.08	0.03	0.037	0.004

Analyte - Measured Values (continued)

Code	Co	Nb	Pb	Sb	Sn	Ti	V	W	Zn	Zr		Size	Type
IARM-215A-G3					0.17	0.07	0.5					Ø 38x38 mm	SUS
IARM-216A-G3	0.6	0.3	0.005	0.06	0.04	0.007	0.03	0.043	0.01	0.05		Ø 38x38 mm	SUS

SUS by U. Nell

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	As	B
SUS-CFE5+	Pig Iron, Check Sample	3.9	0.27	0.18	0.13	0.02	0.11	0.07	0.09	0.09	0.04				
SUS-CFE6+	Cast Iron, grey, Check Sample	(3.3)	2.8	0.4	0.04	0.04	0.06	0.05	<0.01	0.1	0.003				
SUS-CFE7+	Grey Cast Iron, Check Sample	(3.8)	2.53	0.18	0.021	0.024	0.03	0.01	<0.01	0.24	<0.01		0.056		
SUS-CFE8+	Cast Iron, Check Sample	3.2	1.3	0.45	0.025	0.02	0.05	0.11	0.01	0.058	0.05			0.002	0.01
SUS-RG13+	Cast Iron without Mg	3.2	2.0	0.9	0.44	0.05	1.1	0.5	0.3	0.6	0.04				
SUS-RG14+	Cast Iron with Mg	3.2	1.9	0.2	0.05	<0.01	1.0	0.8		0.06	0.03	0.03	0.04		0.05
SUS-RG15+	Cast Iron without Mg	2.1	4.4	0.7	0.4	0.1	0.5	0.5	0.8	<0.01	0.03				
SUS-RG16+	Cast Iron with Mg	3.1	1.9	0.2	0.3	<0.01	1.1	1.2		0.06	0.03	0.03	0.05		0.01
SUS-RG13-SE+	Cast Iron with Se	3.4	2.1	0.9	0.4	0.05	1.1	0.5	0.3	0.7	0.03				

Analyte - Measured Values (continued)

Code	Co	La	Nb	Pb	Se	Sn	Te	Ti	V	W	Zr		Size	Type
SUS-CFE5+			<0.0015			0.04		0.02	0.1				Ø 35-40x30 mm	SUS
SUS-CFE6+						0.004		0.01	0.01				Ø 40x50 mm	SUS
SUS-CFE7+				<0.001		0.003		0.009	0.018				Ø 40x50 mm	SUS
SUS-CFE8+	0.005		<0.001			0.01	0.002	0.05	0.04	<0.01	0.0002		Ø 37-40x30 mm	SUS
SUS-RG13+	<0.01		<0.01	<0.001		0.3		0.02	0.3	0.01			Ø 38x40 mm	SUS
SUS-RG14+		0.01				0.2		0.04	0.17				Ø 38x40 mm	SUS
SUS-RG15+						0.1							Ø 38x40 mm	SUS
SUS-RG16+		0.01				0.2	0.004	0.05	0.2				Ø 36x40 mm	SUS
SUS-RG13-SE+	0.01		<0.01	<0.001	-0.01	0.3		0.04	0.3	0.01			Ø 38x40 mm	SUS

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BAS-SUS

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	As	B
BAS-SUS1	Low Phosphorus Iron	3.1	2.8	0.44	0.05	0.07	0.5	0.19	0.33	0.47	0.02				
BAS-SUS2	Medium Phosphorus Iron	3.6	1.9	0.7	0.17	0.13	0.07	0.48	0.1	0.21	<0.01				
BAS-SUS3	High Phosphorus Iron	3.4	2.2	0.9	1.0	0.1	0.25	0.03	<0.005	0.03	<0.005				
BAS-SUS4	Ductile (Nodular) Iron	3.3	2.7	0.17		0.01	0.09	0.1		0.75	0.02		0.03	0.06	
BAS-SUS5	Ductile (Nodular) Iron	3.8	2.0	0.61		0.008	0.02	1.0		0.009	0.04	0.03	0.09	<0.005	
BAS-SUS6	Malleable Iron	2.5	1.8	0.65	0.05	0.12	0.1			0.02	<0.005				<0.001
BAS-SUS7	Malleable Iron	2.8	0.94	0.29	0.09	0.18	0.07			0.21	0.02				0.004

Analyte - Measured Values (continued)

Code	Bi	Sb	Sn	Ti	V	Size	Type
BAS-SUS1			0.05	<0.005	0.04	60x35x18 mm	SUS
BAS-SUS2			0.09	0.04	0.54	60x35x18 mm	SUS
BAS-SUS3			<0.005	0.12	0.3	60x35x18 mm	SUS
BAS-SUS4		<0.005	<0.005	0.05	0.5	60x35x18 mm	SUS
BAS-SUS5		0.03	0.07	<0.005	0.49	60x35x18 mm	SUS
BAS-SUS6	0.01		0.05	0.02	0.02	60x35x18 mm	SUS
BAS-SUS7	<0.001		<0.01		0.06	60x35x18 mm	SUS

BS-SUS

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Mg	As	Ca	Co
BS-SUCCD+	Cast Iron, SUS	3.28	2.53	0.59	0.02	0.008	0.03	0.02	0.002	0.05	0.015	0.032	0.001	0.0027	0.009
BS-SU-DNR-1	Cast iron SUS, UNS F43000	2.52	2.79	0.88	0.031	0.005	1.56	18.6	0.006	0.016	<0.1	0.04			<0.1
BS-SU-DNR-2	Cast iron SUS, UNS F43000	2.72	2.52	0.85	0.031	0.006	1.62	18.9	0.007	0.02	<0.1	0.05			<0.1

Analyte - Measured Values (continued)

	Fe	Nb	Sb	Sn	Ti	V	Size	Type
BS-SUCCD+				0.002	0.006	0.014	Ø 33-35x17 mm	SUS
BS-SU-DNR-1	[73.5]	<0.1	<0.1	<0.1	<0.1	<0.1	Ø 33x21 mm	SUS
BS-SU-DNR-2	[73.3]	<0.05	<0.1	<0.1	<0.05	<0.1	Ø 33x21 mm	SUS

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NCS-SUS

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	As	B	Co	Nb
NCS AH11345	Cast Iron, SUS	2.06	2.94	1.2	0.041	0.041	0.159	0.151	0.097	0.322	0.017	0.037	0.008	0.006	0.147
NCS AH11346	Cast Iron, SUS	2.53	2.48	0.85	0.17	0.033	1.06	0.255	0.223	1.5	0.028	0.023	0.019	0.008	0.067
NCS AH11349	Cast Iron, SUS	3.66	1.2	0.465	0.56	0.064	0.488	1.31	0.99	0.63	0.012	0.027	0.077	0.009	0.103
NCS AH11350	Cast Iron, SUS	4.3	1.2	0.241	0.044	0.13	2.19	1.02	0.428	0.49	0.02	0.002	0.041	0.01	0.08

Analyte - Measured Values (continued)

Code	Pb	Sb	Sn	Ti	V	W	Size	Type
NCS AH11345	0.006	0.064	0.066	0.032	0.058	0.279	Ø 28x20 mm	SUS
NCS AH11346	0.007	0.025	0.027	0.161	0.136	0.188	Ø 28x20 mm	SUS
NCS AH11349	0.002	0.038	0.096	0.22	0.049	0.055	Ø 28x20 mm	SUS
NCS AH11350	0.003	0.13	0.021	0.154	0.579	0.72	Ø 28x20 mm	SUS

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Other SUS

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	As	B	Bi	Co
CKD-T+	Cast Iron, SUS	2.8	1.6	1.3	0.15	0.18	0.1	0.2	0.2	0.3		0.03			0.05
CKD-U2+	Cast Iron, SUS	3.41	2.18	1.16	0.42	0.099	0.69	0.57	1.15	0.49	0.025	0.03	0.008	0.01	0.012

Analyte - Measured Values (continued)

Code	Nb	Pb	Sb	Se	Sn	Te	Ti	V	W	Zn	Zr				Size	Type
CKD-T+			0.1		0.04	0.02	0.05	0.05			0.01				40x40x21 mm	SUS
CKD-U2+	0.014	0.011	0.022	0.014	0.052	0.017	0.052	0.21	0.002	0.016					40x40x21 mm	SUS

SEI-KTC-13 A-C

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Mg	B	Bi	Ca
SEI-KTC-13 A	Cast Iron (Set of 10 only)	3.5	2.5	0.1	<0.02	<0.01						0.055			
SEI-KTC-13 B	Cast Iron (Set of 10 only)	2.1	3.0	0.05	0.7	0.06	0.5	0.01	0.3	0.55	<0.01		0.1	<0.01	<0.001
SEI-KTC-13 C	Cast Iron (Set of 10 only)	0.2	0.5	0.8	<0.01	<0.01	0.01	0.5	<0.01	0.01	0.1		<0.01	0.02	0.003

Analyte - Measured Values (continued)

Code	Pb	Sb	Sn	Ti	V	Zn		Size	Type
SEI-KTC-13 A				<0.01				Set of 10: 4xA, 4xB and 2xC	SUS
SEI-KTC-13 B	0.01	0.2	0.3		<0.01	<0.01		Set of 10: 4xA, 4xB and 2xC	SUS
SEI-KTC-13 C	0.05	0.01	<0.01	0.3	0.3	0.06		Set of 10: 4xA, 4xB and 2xC	SUS

SEI-KTC-14 D-F

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Mg	Size	Type
SEI-KTC-14 D	Alloy Cast Iron (Set of 10 only)	3.4	2.5	0.1	0.015						0.05	Set of 10: 2xD, 4xE and 4xF	SUS
SEI-KTC-14 E	Alloy Cast Iron (Set of 10 only)	2.4	3.0	0.05	0.005	0.1	1.0	1.0	0.05	0.05	<0.01	Set of 10: 2xD, 4xE and 4xF	SUS
SEI-KTC-14 F	Alloy Cast Iron (Set of 10 only)	4.0	1.0	1.0	0.12	0.005	0.05	0.05	1.0	1.0		Set of 10: 2xD, 4xE and 4xF	SUS

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AR - Chips/Powders

		Analyte - Measured Values				
Code	Description	C	S		Size	Type
AR-300	Cast Iron Standard	3.32	0.014		150 g	CRM
AR-301	Cast Iron Standard	2.07	0.010		150 g	CRM
AR-302	Gray Iron Standard	3.29	0.046		150 g	CRM
AR-304	Ductile Iron Standard	4.23	0.014		150 g	CRM
AR-305	Malleable Iron Standard	2.75	0.015		150 g	CRM
AR-307	Tungsten Carbide Standard	6.15	0.0041		100 g	CRM
AR-309	Nodular Iron Standard	3.71	0.021		150 g	CRM
AR-310	Cast Iron Standard	3.38	0.086		150 g	CRM
AR-315	Cast Iron Shot Standard	3.09	0.111		150 g	CRM
AR-318	Cast Iron Standard	3.08	0.037		150 g	CRM
AR-319	Cast Iron Standard	3.28	0.055		150 g	CRM
AR-322	Cast Iron Standard	3.37	0.046		250 g	CRM
AR-323	Pig Iron Standard	3.84	0.064		250 g	CRM

BAS - Chips/Powders

		Analyte - Measured Values									
Code	Description	C	Si	Mn	P	S	Ni	Cu	Ti	Size	Type
BAS-BCS-CRM 527	Blast Furnace Iron	3.873	1.0	0.316	0.1269	0.0366	0.0229	0.0104	0.0187	100 g	CRM

BS - Chips/Powders

		Analyte - Measured Values													
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	As	Co
BS-CE206	Cast Iron	2.64	2.76	0.99	0.145	0.018	0.068	0.048	0.007	0.45	0.004	0.011	0.0006	0.004	0.029
BS-CE207	Cast Iron	3.05	2.07	1.2	0.09	0.016	0.039	0.048	(0.001)	0.222	0.005	0.016	0.003	0.004	0.031
BS-CE208	Cast Iron	2.41	1.63	0.34	0.118	0.041	0.007	0.047	(0.001)	0.212	0.003	0.018	0.0008	0.004	0.031
BS-CE209	Cast Iron	(2.47)	2.13	0.39	0.167	0.027	0.01	0.045	(0.001)	0.211	0.006	0.026	0.0013	0.003	0.03

	Analyte - Measured Values (continued)					
Code	La	Te	Ti	V	Size	Type
BS-CE206	0.004	<0.002	0.078	0.038	150 g	CRM
BS-CE207	0.004	<0.002	0.079	0.034	150 g	CRM
BS-CE208	0.007	<0.002	0.048	0.024	150 g	CRM
BS-CE209	0.008	<0.002	0.062	0.03	150 g	CRM

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CKD - Chips/Powders

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Ce	Mg	As	B
CKD-228	Cast Iron	1.95	2.51	1.27	0.3	0.145	0.31	0.31	1	0.56	0.01			0.035	0.005
CKD-230/100	Cast Iron	2.55	1.04	0.31	0.049	0.024	0.09	1.11	0.05	1.05	0.01	0.01	0.04	0.005	
CKD-231B	Cast Iron	3.5	0.59	0.55	0.031	0.012	0.02	0.56	0.015	0.005	0.005	(0.04)	0.04	0.005	

Analyte - Measured Values (continued)

Code	Bi	Co	La	Pb	Sb	Se	Sn	Te	Ti	V	W	Zr		Size	Type
CKD-228	0.005	0.015		0.005	0.02	0.02	0.05	0.01	0.03	0.005	0.04	0.015		100 g	CRM
CKD-230/100	0.001	0.01	0.005		0.006		0.01		0.01	0.02				100 g	CRM
CKD-231B	(0.001)	0.0	(0.015)	0.000	0.01		0.000		0.005	0.04	0.0	0.00		100 g	CRM

CTIF - Chips/Powders

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Cu		Size	Type
CTIF-FA10	Cast Iron	1.976	1.48	1.063	0.045		1.986	20.05	0.492		100 g	CRM
CTIF-FA20	Cast Iron	0.643	1.519	0.368	0.045		28.3				100 g	CRM
CTIF-FB20	Cast Iron	2.114	1.012	0.464	0.039	0.128	0.035				100 g	CRM
CTIF-FB20-1	Cast Iron	3.552	(0.935)	(0.39)	(0.07)	0.059	(0.1)				100 g	CRM
CTIF-FB20-2	Cast Iron	3.557	(0.935)	(0.39)	(0.07)	0.0614	(0.1)				100 g	CRM
CTIF-FG10	Cast Iron	2.322	2.467	1.098	0.111	0.016					100 g	CRM
CTIF-FG20	Cast Iron	2.487	1.726	0.571	1.44	0.109					100 g	CRM

DH - Chips/Powders

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	As	Co	Nb	Ti	V	Size	Type
DH-SE25-12	Pig iron	4.738	1.865	0.758	0.081	0.103	0.08	0.026	0.002	0.106	0.054	0.012	0.016	<0.002	0.036	0.015	50 g	RM

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ECRM - Chips/Powders

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Mg	As	B
ECRM-D 428-2	Cast iron GG 25, powdered material produced by atomization of the melt	2.747	1.751	0.75	0.0691	0.1105	0.0366	0.0358		0.0996			0.0156	
ECRM-B 451-2	Austenitic cast iron - chips (BAS-BCS-CRM 263/3)	2.059	2.092	1.079	0.0593	0.0315	1.097	14.01		6.26				
ECRM-B 453-1	High Si and P iron - chips (BAS-BCS-CRM 206/3)	(2.44)	3.17	0.72	1.63	0.049	0.053	0.068		0.1			0.019	
ECRM-B 454-1	Hematite iron - chips (BAS-CRM 236/3)	(2.53)	2.0	1.16	0.046	0.068		(0.21)		(0.07)			(0.025)	
ECRM-D 476-3	Pig iron - powder	3.39	1.813	0.987	0.0908	0.0493	0.0648	0.0549		0.2445			0.0145	
ECRM-D 478-2	Hematite pig iron - powder	4.003	2.411	0.321	0.201	0.046	0.251	0.151		0.1276			(0.0018)	0.0006
ECRM-D 479-1	Alloyed cast iron - powder	2.86	2.018	0.136	0.0764	0.0893	1.001	1.0123	0.1959	(0.0065)	0.0143			
ECRM-D 480-1	Nodular iron - powder	3.029	2.407	0.1514	0.0021	0.0086		0.4826		(0.0052)	0.0163	0.0172		
ECRM-B 481-1	Nodular iron - chips	3.91	2.29	0.448	0.019	0.004	0.063	1.19	0.011	0.15	0.023	0.051	0.01	
ECRM-B 482-2	Low alloyed cast iron - chips	2.599	1.815	0.728	0.0974	0.0491	0.675	2.284	0.454	1.231				

Analyte - Measured Values (continued)

Code	N	Ti	Tl	V		Size	Type
ECRM-D 428-2		0.0311		0.012		100 g	CRM
ECRM-B 451-2						100 g	CRM
ECRM-B 453-1		(0.04)	0.04	0.05		100 g	CRM
ECRM-B 454-1		0.052	0.052			100 g	CRM
ECRM-D 476-3	0.0038	0.0222		0.0115		100 g	CRM
ECRM-D 478-2	0.0023	0.0328		0.0113		100 g	CRM
ECRM-D 479-1						100 g	CRM
ECRM-D 480-1						100 g	CRM
ECRM-B 481-1						100 g	CRM
ECRM-B 482-2						100 g	CRM

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ECRM - Chips/Powders (continued)

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	As	Co	N	Sn
ECRM-B 483-1	High duty iron - chips	2.46	1.75	0.596	0.615	0.103	0.039								0.13
ECRM-B 484-1	Whiteheart malleable iron - chips	3.2	0.717	0.395	0.121	0.23	0.155								
ECRM-F 485-2	Cast iron - chips	3.308	0.508	0.19	0.61	0.165	0.0845	0.0742		0.0303				0.0058	
ECRM-F 485-3	Cast iron - chips	3.514				0.1488								0.0081	
ECRM-B 486-1	Foundry iron - chips	2.21	2.43	0.841	1.0	0.023	0.104	0.057		0.548					0.074
ECRM-F 487-1	Cast iron - chips	3.27	2.409	0.094	0.002	0.0007	0.063	0.04				0.011	0.0088	0.0042	
ECRM-F 487-2	Cast iron - chips	3.573	0.0898	0.0491	0.0065	0.0031	0.0248	0.0219	0.0034	0.0136	0.079	0.0063	0.0151	0.004	0.0045
ECRM-F 488-2	Low alloyed white cast iron - chips	3.956	0.374	0.201	0.0111	0.1173	0.303	0.1247		0.0256				0.0052	0.0013
ECRM-B 489-1	White cast iron - chips	2.86	1.524	(0.51)	0.815	0.155				0.274				(0.0056)	
ECRM-F 491-1	White cast iron, for C/S-determination - chips	3.616				0.0866									
ECRM-F 492-1	Cast iron, for C/S/N-determination - chips	3.258				0.0854								0.0048	

Analyte - Measured Values (continued)

Code	Te	Ti	V	Zn		Size	Type
ECRM-B 483-1						100 g	CRM
ECRM-B 484-1						100 g	CRM
ECRM-F 485-2						100 g	CRM
ECRM-F 485-3						100 g	CRM
ECRM-B 486-1			0.02			100 g	CRM
ECRM-F 487-1						100 g	CRM
ECRM-F 487-2	0.0064	0.0022	0.0117	0.0012		100 g	CRM
ECRM-F 488-2		0.0636	0.0545			100 g	CRM
ECRM-B 489-1						100 g	CRM
ECRM-F 491-1						100 g	CRM
ECRM-F 492-1						100 g	CRM

IPT - Chips/Powders

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	Tl	V	Size	Type
IPT-37B	Cast iron, gray	3.37	1.66	0.737	0.148	0.069	0.088	0.074		0.052	0.034	0.034		80 g	CRM
IPT-49	Cast Iron, white	2.11	0.78	0.272	0.012	0.019	0.02	0.021		0.04				80 g	CRM
IPT-69	Cast Iron	3.34	2.07	0.715	0.267	0.018	0.353	0.272	(0.004)	0.47	0.019	0.019		80 g	CRM
IPT-75A	Cast Iron, gray (Ni-Cr-Mo-Cu)	3.4	1.98	0.722	0.25	0.033	0.487	0.425	0.438	0.433	0.022		0.03	80 g	CRM

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NCS - Chips/Powders

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ce	Mg	As	Co	La
NCS HC11003	Cast Iron	3.77	1.47	0.659	0.23	0.129									
NCS HC11003A	Cast Iron	3.36	1.39	0.561	0.166	0.176									
NCS HC11003B	Cast Iron	3.36	1.82	0.386	0.135	0.154									
NCS HC11004	Cast Iron	2.72	2.56	0.359	0.124	0.115									
NCS HC11005	Cast Iron	2.19	3.07	0.219	0.047	0.048									
NCS HC11006	Cast Iron	3.11	1.37	0.85	0.27	0.13									
NCS HC11007	Pig Iron	2.7	1.72	1.66	0.201	0.102	0.589			0.031					
NCS HC11008	Pig Iron	1.9	2.72	1.96	0.06	0.097	0.766			0.041					
NCS HC11009	Pig Iron	3.26	1.18	1.98	0.385	0.081	0.373			0.02					
NCS HC11012	High Chromium Cast Iron (NIM-GBW01120)	1.95	0.59	0.926	0.0084	0.0079	13.11		0.52						
NCS HC11013	High Chromium Cast Iron (NIM-GBW01121)	2.35	1.05	1.05	0.01	0.0094	15.06		2.84						
NCS HC11015	Rare Earth Magnesium Cast Iron	2.74	2.32	0.473	0.022	0.0009	0.04	0.627	0.0016	0.031	0.019	0.012	0.011	0.011	0.013
NCS HC13004	High Cr Cast Iron	2.46	0.32	1.63	0.383	0.012	12.95	0.122	0.76	0.73					
NCS HC13005	High Cr Cast Iron	2.86	0.365	1.07	0.058	0.028	22.53	0.25	1.14	0.42					
NCS HC13006	High Cr Cast Iron	2.31	0.59	0.828	0.064	0.043	26.48	0.49	2.7	0.355					
NCS HC13007	Alloy Cast Iron	3.95	1.3	0.271	0.129	0.233	4.31	0.029	0.36	0.011					

Analyte - Measured Values (continued)

Code	N	REE	Sb	Sn	Ti	V	Size	Type
NCS HC11003							100 g	CRM
NCS HC11003A							100 g	CRM
NCS HC11003B							100 g	CRM
NCS HC11004							100 g	CRM
NCS HC11005							100 g	CRM
NCS HC11006							100 g	CRM
NCS HC11007					0.014	0.0067	100 g	CRM
NCS HC11008					0.013	0.0075	100 g	CRM
NCS HC11009					0.024	0.0074	100 g	CRM
NCS HC11012					0.064	0.137	100 g	CRM
NCS HC11013					0.062	0.16	100 g	CRM
NCS HC11015	0.0047	0.036	(0.0005)	0.0037	0.015	0.031	80 g	CRM
NCS HC13004					0.0092	0.026	150 g	CRM
NCS HC13005					0.005	0.039	150 g	CRM
NCS HC13006					0.0053	0.04	150 g	CRM
NCS HC13007					0.016	0.012	150 g	CRM

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NCS - Chips/Powders (continued)

		Analyte - Measured Values													
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	V		Size	Type
NCS HC13008	Alloy Cast Iron	3.46	3.15	1.05	0.252	0.062	0.202	0.132	0.047	0.263	0.047	0.007		150 g	CRM
NCS HC13009	Alloy Cast Iron	3.06	2.17	1.08	0.162	0.112	0.045	0.0069	0.0036	0.016	0.035	0.0053		150 g	CRM
NCS HC13010	Alloy Cast Iron	3.35	2.44	0.699	0.147	0.045	0.96	0.3	2.39	0.018				150 g	CRM
NCS HC13011	Alloy Cast Iron	3.23	4.3	1.2	0.31	0.045	1.36	0.919	0.639	0.243				150 g	CRM
NCS HC13013	Iron powder	0.0041	0.018	0.126	0.0085	0.021								150 g	CRM
NCS HC13015	Pig Iron	2.51	4.08	0.62	0.104	0.02								150 g	CRM
NCS HC13016	Pig Iron	2.99	1.29	1.3	0.278	0.1								150 g	CRM
NCS HC13020	Pig Iron	2.72	1.32	0.508	0.105	0.024								100 g	CRM
NCS HC13021	Pig Iron	2.52	1.41	1.46	0.273	0.06								100 g	CRM
NCS HC13022	Pig Iron	2.85	3.02	0.821	0.071	0.027								100 g	CRM
NCS HC13024	Pig Iron	1.88	4.13	0.472	0.16	0.034								100 g	CRM
NCS HC13025	Pig Iron	2.51	2.28	0.301	0.087	0.081								100 g	CRM
NCS HC13026	Cast Iron	1.28	0.644	0.741	0.0285	0.0054	21.12	1.12	0.335	0.044	0.06	0.287		100 g	CRM
NCS HC13027	Cast Iron	1.34	0.843	0.969	0.031	0.0035	22.4	1.6	0.546	0.028	0.106	0.035		100 g	CRM
NCS HC13028	Cast Iron	1.58	1.11	1.37	0.032	0.0038	24.73	2.07	0.842	0.029	0.184	0.032		100 g	CRM
NCS HC14003	Pig Iron (NIM-GBW07219A)	2.03	1.5	0.402	0.077	0.042				0.085				150 g	CRM

		Analyte - Measured Values																
Code	Description	C	Si	Mn	P	S	Cr	Ni	Cu	Al	As	N	Pb	Sb	Sn	Ti	Size	Type
NCS HC15004	Pure Iron (NIM-GBW01404)	0.0272	0.0994	0.246	0.0094	0.012	0.013	0.0202	0.031	0.37							100 g	CRM
NCS HC15006	Pure Iron (NIM-GBW01406)	0.08	0.171	0.043	0.0159	0.0075	0.043	0.147	0.135	0.088							100 g	CRM
NCS HC15006A	Pure Iron	0.061	0.341	0.254	0.021	0.0058	0.114	0.182	0.168	0.412		0.012					100 g	CRM
NCS HC15007	Pure Iron (NIM-GBW01407)	0.091	0.341	0.399	0.0246	0.017	0.148	0.243	0.201	0.18							100 g	CRM
NCS HC15007A	Pure Iron	0.08	0.506	0.358	0.036	0.031	0.17	0.203	0.254	0.432		0.018					100 g	CRM
NCS HC15011	Pig Iron	2.58	2.76	1.0	0.087	0.068											150 g	CRM
NCS HC15014	Pure Iron	0.0208	0.0922	0.246	0.0121	0.007	0.013	0.0202	0.02	0.046	0.0002		0.000085	0.0005	0.0012		100 g	CRM
NCS HC16001B	Pig Iron	3.04	1.34	1.22	0.072	0.052			0.025							0.008	100 g	CRM
NCS HC16002B	Pig Iron	2.38	0.48	0.7	0.082	0.034			0.026							0.006	100 g	CRM
NCS HC16003B	Pig Iron	3.53	1.83	1.1	0.066	0.048			0.258							0.025	100 g	CRM
NCS HC16004B	Pig Iron	3.39	3.41	0.94	0.113	0.016			0.202							0.058	100 g	CRM
NCS HC16006	Pig Iron (NIM-GBW01106A)	2,809	0.856	1.48	0.039	0.062			0.045							0.0118	100 g	CRM
NCS HC16006B	Pig Iron (NIM-GBW01106B)	2.71	1.14	0.98	0.077	0.089			0.036							0.007	100 g	CRM
NCS HC16008	Pig Iron (NIM-GBW01108)	3.58	1.59	1.66	0.039	0.044			0.024							0.03	100 g	CRM
NCS HC16008B	Pig Iron (NIM-GBW01108B)	3.45	1.44	1.84	0.046	0.018			0.015							0.019	100 g	CRM
NCS HC16009	Pig Iron (NIM-GBW01109A)	2,202	0.378	0.528	0.0226	0.08			0.063							0.0094	100 g	CRM

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NCS - Chips/Powders (continued)

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	As	Bi	Pb	Sb	Sn
NCS HC16009B	Pig Iron (NIM-GBW01109B)	2.31	2.28	0.509	0.025	0.1				0.038					
NCS HC16010B	Pig Iron	3.9	0.963	0.414	0.044	0.044				0.01					
NCS HC16015	Pig Iron	3.51	2.31	0.882	0.083	0.025				0.308					
NCS HC16016	Pig Iron	3.04	0.85	0.646	0.032	0.102									
NCS HC16022	Pig Iron	2.83	2.19	0.721	0.094	0.067									
NCS HC16023	Pig Iron	3.8	1.42	0.929	0.171	0.016									
NCS HC16024	Pig Iron	3.59	1.96	0.514	0.315	0.033									
NCS HC16025	Pig Iron	3.46	2.61	0.67	0.081	0.058									
NCS HC16026	Pig Iron	3.22	2.25	0.726	0.085	0.059									
NCS HC16027	Pig Iron	4.06	0.725	0.094	0.038	0.029	0.01	0.0023	0.0027	0.0023	0.0011	<0.00005	<0.0002	0.00013	0.00014
NCS HC16028	Pig Iron	4.0	1.55	0.634	0.046	0.0073	0.036	0.0045	0.0089	0.0051	0.0012	<0.00005	<0.0002	0.00016	0.00018
NCS HC18002	Cast Iron	2.67	2.94	1.36	0.051	0.031									
NCS HC18003	Pig Iron	3.18	1.43	0.732	0.243	0.049					0.064				
NCS HC18004	Pig Iron	4.0	0.796	0.26	0.11	0.023					0.064				
NCS HC18005	Pig Iron	2.89	2.01	0.733	0.108	0.0058					0.091				
NCS HC18006	Pig Iron	2.65	1.99	0.75	0.114	0.0057					0.092				

Analyte - Measured Values (continued)

Code	Ti	V	Zn		Size	Type
NCS HC16009B	0.03				100 g	CRM
NCS HC16010B	0.001				100 g	CRM
NCS HC16015					100 g	CRM
NCS HC16016					150 g	CRM
NCS HC16022					100 g	CRM
NCS HC16023					150 g	CRM
NCS HC16024					150 g	CRM
NCS HC16025					150 g	CRM
NCS HC16026					150 g	CRM
NCS HC16027	0.026	0.0064	(0.0003)		150 g	CRM
NCS HC16028	0.084	0.018	(0.0002)		150 g	CRM
NCS HC18002					150 g	CRM
NCS HC18003					100 g	CRM
NCS HC18004					100 g	CRM
NCS HC18005					100 g	CRM
NCS HC18006					100 g	CRM

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NCS - Chips/Powders (continued)

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Mg	As	Co	Ga	REE
NCS HC18007	Pig Iron	4.17	1.03	0.348	0.078	0.0233						0.017			
NCS HC18008	Pig Iron	4.13	1.02	0.348	0.078	0.023						0.016			
NCS HC18009	Pig Iron	3.83	1.88	0.74	0.186	0.023						0.025			
NCS HC18010	Pig Iron	3.66	2.399	0.59	0.145	0.041						0.036			
NCS HC18011	Pig Iron	3.43	1.93	0.729	0.079	0.0082					0.03	0.036			
NCS HC18012	Pig Iron	3.23	1.93	0.74	0.079	0.008						0.037			
NCS HC18013	Pig Iron	3.4	2.12	0.79	0.049	0.0087						0.013			
NCS HC18014	Pig Iron	3.36	2.136	0.792	0.049	0.0087						0.012			
NCS HC18015	Pig Iron	1.01	1.09	0.908	0.136	0.046						0.039			
NCS HC18016	Pig Iron	3.2	2.91	0.42	0.104	0.0092						0.092			
NCS HC19002	V Ti Pig Iron (NIM-GBW07225)	3.0	1.42	0.869	0.048	0.145	0.033	0.027		0.066			0.033	0.0079	
NCS HC19004	V Ti Pig Iron (NIM-GBW07226A)	2.38	2.12	1.28	0.069	0.0077	0.039	0.028		0.07			0.034	0.0073	
NCS HC19007	Nodular Cast Iron	2,855	2,615	0.977	0.05	0.021	0.0433	0.032		0.046	0.036		0.036		0.04
NCS HC19008	Nodular Cast Iron	2,486	2,529	0.734	0.08	0.015	0.0425	0.03		0.044	0.0106		0.035		0.0185
NCS HC19010	V Ti RE Spherulitic Iron	2.69	2.92	0.79	0.029	0.023	0.227	0.025	0.0016	0.042	0.028				0.04
NCS HC19016	V Ti Pig Iron	2.21	3.78	0.42	0.014	0.012	0.04	0.032		0.047	0.099		0.037		0.099

Analyte - Measured Values (continued)

Code	Ti	Tl	V	Size	Type
NCS HC18007				100 g	CRM
NCS HC18008				100 g	CRM
NCS HC18009				100 g	CRM
NCS HC18010				100 g	CRM
NCS HC18011				100 g	CRM
NCS HC18012				100 g	CRM
NCS HC18013				100 g	CRM
NCS HC18014				100 g	CRM
NCS HC18015				100 g	CRM
NCS HC18016				100 g	CRM
NCS HC19002	0.254	0.254	0.29	100 g	CRM
NCS HC19004	0.314	0.314	0.4	100 g	CRM
NCS HC19007	0.106		0.536	100 g	CRM
NCS HC19008	0.096		0.394	100 g	CRM
NCS HC19010	0.109		0.236	100 g	CRM
NCS HC19016	0.066		0.31	100 g	CRM

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NCS - Chips/Powders (continued)

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Mg	Co	REE	Ti	V	Size	Type
NCS HC19017	V Ti Pig Iron	2.77	2.52	0.57	0.015	0.014	0.042	0.031		0.046	0.07	0.037	0.07	0.072	0.356	100 g	CRM
NCS HC19018	V Ti Pig Iron	2.7	3.1	0.625	0.024	0.011	0.043	0.031		0.049	0.083	0.035	0.083	0.125	0.405	100 g	CRM
NCS HC28012	Cast Iron	3.06	1.36	0.77	0.071	0.094	0.0325	0.0415		0.068				0.032		150 g	CRM
NCS HC28013	Cast Iron	2.65	2.29	0.575	0.45	0.098	0.041	0.0675		0.086				0.041		150 g	CRM
NCS HC28014	Cast Iron	3.05	2.67	0.57	0.3	0.079	0.022	0.018		0.194						150 g	CRM
NCS HC28015	Cast Iron	3.58	3.02	0.97	0.08	0.014	0.0075	0.0125		0.091						150 g	CRM
NCS HC28023	High P Cast Iron	3.08	1.61	0.704	0.847	0.13	0.094			0.294						150 g	CRM
NCS HC28025	High P Cast Iron	2.98	1.8	0.698	1.8	0.087	0.081			0.201						150 g	CRM
NCS HC28026	High P Cast Iron	2.9	1.81	0.702	1.91	0.124	0.086			0.245						150 g	CRM
NCS HC28028	Alloy Cast Iron	3.11	1.71	0.605	0.25	0.088	0.28			1.03				0.0494	0.023	150 g	CRM
NCS HC28029	Alloy Cast Iron	2.85	1.91	0.85	0.086	0.0995	0.316			0.865				0.033	0.017	150 g	CRM
NCS HC28030	Alloy Cast Iron	3.23	1.28	0.736	0.109	0.124	0.12			0.12						150 g	CRM
NCS HC28031	Alloy Cast Iron	2.95	1.75	0.595	0.065	0.107	0.23		0.155	0.642				0.03		150 g	CRM
NCS HC28032	Alloy Cast Iron	3.19	1.295	0.955	0.107	0.108	0.54		0.303	0.745				0.04		150 g	CRM
NCS HC28034	Alloy Cast Iron	3.15	1.67	0.795	0.321	0.082	0.464		0.515	1.04				0.053		150 g	CRM
NCS HC28035	Alloy Cast Iron	3.15	1.44	0.685	0.49	0.076				0.915						150 g	CRM

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Mg	Bi	Nb	REE	Size	Type
NCS HC28054	Alloy Cast Iron	3.01	2.03	0.645	0.188	0.011	0.619	1.19	0.355		0.047		0.095		150 g	CRM
NCS HC28055	Low phosphorus pig iron, chips	4.04	1.4	0.128	0.055	0.0095									100 g	CRM
NCS HC28056	Low phosphorus pig iron	3.98	1.15	0.128	0.055	0.0185									100 g	CRM
NCS HC30001	Cast Iron	2.26	2.21	1.28	0.178	0.025				1.01					100 g	CRM
NCS HC30002	Cast Iron	3.12	0.96	0.687	0.1	0.023				0.29					100 g	CRM
NCS HC30003	Cast Iron	2.62	1.64	1.68	0.12	0.032				0.52					100 g	CRM
NCS HC37001	High Cr Cast Iron	3.4	1.35	0.99	0.06	0.054	13.54	0.63	1.03	1.22					80 g	CRM
NCS HC37002	High Cr Cast Iron	3.42	1.05	0.71	0.058	0.064	8.93	0.23	1.74	0.9					80 g	CRM
NCS HC37002A	High Chromium Cast Iron	2.42	1.05	0.71	0.058	0.064	8.93	0.23	1.74	0.9					80 g	CRM
NCS HC37003	High Cr Cast Iron	2.95	1.32	1.72	0.062	0.034	15.39	1.05	1.12	1.06					80 g	CRM
NCS HC37005	RE-Mg Spherulitic Iron	1.92	3.36	0.955	0.041	0.0064			0.128	0.181	0.073			0.059	100 g	CRM
NCS HC37008	RE-Mg Spherulitic Iron	2.59	3.08	0.373	0.042	0.012			0.514	0.288	0.014			0.011	100 g	CRM
NCS HC37010	Cast Iron	3.63	2.82	0.762	0.187	0.07									100 g	CRM
NCS HC37011	Cast Iron	3.73	2.58	0.565	0.117	0.067									100 g	CRM
NCS HC37012	Cast Iron	3.75	2.15	0.73	0.152	0.068									100 g	CRM
NCS HC37013	Wrought Iron	2.11	1.7	0.353	0.167	0.139	0.119					0.0025			100 g	CRM

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NCS - Chips/Powders (continued)

		Analyte - Measured Values													
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Mg	Bi	REE	Size	Type
NCS HC37014	Wrought Iron	2.25	1.03	0.537	0.241	0.088	0.163					0.00093		100 g	CRM
NCS HC37017	High Cr Cast Iron	2.95	1.32	1.72	0.062	0.034	15.39	1.05	1.12	1.06				80 g	CRM
NCS HC37016	High Cr Cast Iron	3.42	1.05	0.71	0.058	0.064	8.93	0.23	1.74	0.9				80 g	CRM
NCS HC37018	Manganese Spherulitic Iron	2.78	5.96	6.8	0.12	0.0027					0.049		0.041	100 g	CRM
NCS HC37020	Manganese Spherulitic Iron	2.88	3.75	6.4	0.11	0.0035					0.068		0.047	100 g	CRM
NCS HC37021	Manganese Spherulitic Iron	2.79	6.58	8.77	0.1	0.006					0.028		0.045	100 g	CRM
NCS HC37034	Pig Iron	3.73	2.58	0.565	0.117	0.067								100 g	CRM
NCS HC37029	Pig Iron	2.15	2.69	1.08	0.451	0.068	0.221			0.752				100 g	CRM
NCS HC37030	Pig Iron	2.22	2.2	0.869	0.339	0.101	0.142			0.501				100 g	CRM
NCS HC37032	Pig Iron	2.28	1.34	0.358	0.086	0.161	0.028			0.041				100 g	CRM
NCS HC37033	Pig Iron	2.63	2.82	0.762	0.187	0.07								100 g	CRM
NCS HC37035	Pig Iron	3.75	2.15	0.73	0.152	0.068								100 g	CRM
NCS HC37036	Cast Iron	1.67	1.9	1.05	0.085	0.024	0.055					0.0034		100 g	CRM
NCS HC37037	Cast Iron	1.9	2.34	0.78	0.11	0.055	0.025					0.0038		100 g	CRM
NCS HC37038	Cast Iron	2.01	1.44	0.677	0.057	0.115	0.113					0.0015		100 g	CRM
NCS HC37039	Cast Iron	2.04	3.37	1.34	0.479	0.038	0.197			0.642				100 g	CRM

		Analyte - Measured Values													
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	V		Size	Type
NCS HC37040	Cast Iron	2.15	2.69	1.08	0.451	0.068	0.221			0.752				100 g	CRM
NCS HC37041	Cast Iron	2.22	2.2	0.869	0.339	0.101	0.142			0.501				100 g	CRM
NCS HC37042	Cast Iron	2.04	1.86	0.67	0.226	0.103	0.054			0.176				100 g	CRM
NCS HC37043	Cast Iron	2.28	1.34	0.358	0.086	0.161	0.028			0.041				100 g	CRM
NCS HC37044	Cast iron	3.07	3.03	0.87	0.11	0.08								100 g	CRM
NCS HC37045	Cast iron	3.17	2.66	0.61	0.206	0.097								100 g	CRM
NCS HC37046	Cast iron	3.33	1.76	0.46	0.521	0.18								100 g	CRM
NCS HC37047	Cast iron	3.22	1.66	0.4	0.687	0.116								100 g	CRM
NCS HC37048	Cast iron	3.34	2.42	0.55	0.121	0.165								100 g	CRM
NCS HC37049	Cast iron	2.68	2.34	0.58	0.295	0.136								100 g	CRM
NCS HC37050	Cast iron	(3.85)	2.34	0.57	0.235	0.136								100 g	CRM
NCS HC37051	High Chromium Cast Iron	2.69	0.59	0.65	0.072	0.088	10.51	0.43	0.5	0.63	0.013	0.56		80 g	CRM
NCS HC39001	Cast Iron	2.85	2.48	0.38	0.081	0.096								100 g	CRM
NCS HC39002	Cast Iron	2.81	1.71	0.57	0.062	0.134								100 g	CRM
NCS HC39003	Cast Iron	2.95	1.49	0.26	0.142	0.085								100 g	CRM
NCS HC39004	Cast Iron	2.78	2.17	0.78	0.066	0.082								100 g	CRM

Values listed in mass %: ( ) Uncertified Value

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NCS - Chips/Powders (continued)

		Analyte - Measured Values									
Code	Description	C	Si	Mn	P	S	Al	B		Size	Type
NCS HC39005	Cast Iron	3.18	1.57	0.76	0.122	0.073				100 g	CRM
NCS HC39008	Cast Iron	2.59	2.17	0.859	0.187	0.093				100 g	CRM
NCS HC39009	Cast Iron	2.47	3.33	1.56	0.318	0.057				100 g	CRM
NCS HC39010	Cast Iron	2.65	1.29	0.331	0.113	0.134				100 g	CRM
NCS HC39011	Boron Cast Iron	2.96	1.67	0.57	0.082	0.058		0.061		100 g	CRM
NCS HC39012	Boron Cast Iron	3.03	2.08	0.68	0.128	0.064		0.125		100 g	CRM
NCS HC39013	Boron Cast Iron	2.86	2.35	0.56	0.106	0.052		0.0101		100 g	CRM
NCS HC41002	DT4	0.023	0.075	0.178	0.016	0.009	0.309			150 g	CRM

		Analyte - Measured Values																
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Pb	REE	Sb	Ti	V	Size	Type
NCS HC41010	Cast Iron	2.64	1.49	0.54	0.086	0.029	0.086	0.03	0.021	0.056					0.024	0.011	150 g	CRM
NCS HC41011	Cast Iron	2.64	2.23	0.725	0.177	0.033	0.151	0.035	0.105	0.146					0.031	0.014	150 g	CRM
NCS HC41012	Cast Iron	2.52	3.86	1.24	0.635	0.032	0.115	0.037		0.114	0.017	0.0008		0.0011	0.071	0.033	150 g	CRM
NCS HC41013	Cast Iron	2.46	2.66	0.93	0.41	0.041	0.105	0.036		0.132	0.026	0.0008		0.0011	0.061	0.024	150 g	CRM
NCS HC93001	Pig Iron	4.01	1.49	1.15	0.097	0.069											100 g	CRM
NCS HC93002	Alloy Cast Iron	1.82	3.54	1.84	0.027	0.097	0.6	0.95	0.16	0.24			0.024		0.46	0.2	100 g	CRM
NCS HC93003	Alloy Cast Iron	2.4	2.47	1.19	0.072	0.084	0.97	0.23	0.11	2.18			0.025		0.13	0.16	100 g	CRM
NCS HC93004	Alloy Cast Iron	3.28	2	0.48	0.34	0.018	0.21	0.33	1.1	0.82			0.01		0.035	0.06	100 g	CRM

		Analyte - Measured Values														
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	REE	Ti	V		Size	Type
NCS HC93005	Alloy Cast Iron	2.76	1.37	0.69	0.14	0.058	0.39	0.59	0.65	1.36	0.007	0.15	0.3		100 g	CRM
NCS HC93006	Alloy Cast Iron	2.64	1.21	0.29	0.43	0.079	1.92	2.65	0.25	0.35	0.044	0.029	0.02		100 g	CRM
NCS HC93007	Alloy Cast Iron	3.94	0.82	0.14	0.058	0.028	0.14	1.56	0.42	0.49	0.027	0.08	0.58		100 g	CRM

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NIST - Chips/Powders

Analyte - Measured Values

Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Mg	As	Co	N	Ti
NIST-4L	Cast iron	3.21	1.33	0.82	0.149	0.043	0.118	0.042	0.04	0.24					
NIST-5M	Cast iron	2.59	1.83	0.74	0.32	0.133	0.08	0.041	(0.029)	0.89				(0.006)	(0.097)
NIST-6G	Cast iron	2.85	1.05	1.05	0.557	0.124	0.37	0.135	0.035	0.502		(0.042)		0.005	0.059
NIST-82B	Cast iron (Ni-Cr)	2.85	2.1	0.745	0.025	0.007	0.333	1.22	0.002	0.038					0.027
NIST-107C	Cast Iron (Ni-Cr-Mo)	2.99	1.21	0.48	0.079	0.059	0.693	2.2	0.83	0.205					(0.019)
NIST-122I	Cast iron	3.47	0.89	0.53	0.28	0.087	0.151	0.047	0.008	0.033					0.024
NIST-341	Ductile cast iron	1.81	2.44	0.92	0.024	0.007	1.98	20.32	0.01	0.152	0.068				0.018
NIST-342A	Nodular cast iron	1.86	2.73	0.274	0.019	0.002141	0.034	0.058	0.006	0.135	0.07				0.02
NIST-890	Cast Iron, HC250+V	2.91	0.67	0.62	0.025	0.015	32.4	0.397	0.018	0.055					
NIST-892	Cast Iron, Ni-Hard, Type IV	3.33	1.83	0.76	0.054	0.015	10.18	5.53	0.2	0.27			0.31		

Analyte - Measured Values (continued)

Code	V		Size	Type
NIST-4L	0.024		150 g	CRM
NIST-5M	0.033		150 g	CRM
NIST-6G	0.056		150 g	CRM
NIST-82B	0.027		150 g	CRM
NIST-107C	(0.015)		150 g	CRM
NIST-122I	0.012		150 g	CRM
NIST-341	0.012		150 g	CRM
NIST-342A			150 g	CRM
NIST-890	0.045		150 g	CRM
NIST-892	0.041		150 g	CRM

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SEI - Chips/Powders

		Analyte - Measured Values														
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	As	N	Ti	V	Size	Type
SEI-110-13	JSS 110-13: Pig iron for casting	4.13	1.9	0.217	0.082	0.012	0.0197	0.0133		0.0042	0.0019	0.0045	0.044	0.0126	100 g	CRM
SEI-120-1	JSS 120-1: Cast Iron - 3C	2.85	1.32	0.7	0.053	0.0095	0.28	0.12	(0.007)	0.29		0.0058	0.006	0.007	150 g	CRM

VS - Chips/Powders

		Analyte - Measured Values														
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Mg	As	Co	Ti	Size	Type
VS-CH1	C + S in Cast Iron	2.94	0.293	0.271	0.0125	0.029		0.061				(0.004)		0.046	100 g	CRM
VS-CH5	C + S in Cast Iron	2.27	1.86	1.27	0.0115	0.0044	0.327	0.061		0.069	0.042	(0.005)			100 g	CRM
VS-CH6	C + S in Cast Iron	3.01	2.38	0.776	0.289	0.031	0.261	0.79	0.318				0.048	0.028	100 g	CRM
VS-CH7	C + S in Cast Iron	2.3	2.67	1.04	0.59	0.0154	0.13					(0.001)			100 g	CRM
VS-CH12/2	Cast Iron	4.33	2.82	0.968	0.051	0.0101						(<0.005)			100 g	CRM
VS-CH13/1	C + S in Cast Iron, in Argon	4.16	2.9	1.11	0.067	0.034	1.3	0.454	1.16	0.91		(<0.002)			100 g	CRM
VS-CH14	C + S in Cast Iron	3.81	2.09	1.05	0.061	0.034	0.724	1.52	0.625	0.427		(<0.005)	0.265		100 g	CRM
VS-CH15	C + S in Cast Iron	3.04	1.49	1.08	0.211	0.04	2.04	0.256		0.606		(0.006)		0.7	100 g	CRM
VS-CH16	C + S in Cast Iron	2.64	0.864	1.23	0.0237	0.049	1.77	4.15		0.242		(0.007)			100 g	CRM

Other - Chips/Powders

		Analyte - Measured Values															
Code	Description	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	B	Co	Sn	Ti	Size	Type
MQ-CH02X	Cast iron	2.9	1.36	1.08	0.006	0.013	0.59	0.66	0.23	(0.04)	(0.03)	(0.016)	(0.06)	(0.015)	0.16	100 g	RM

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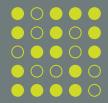

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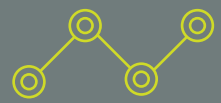

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