

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Zn	Sb	
NCS HS11011b	Pure iron	0.0023	0.0023	0.013	0.0014	0.0014	0.0066	0.0003	0.0027	0.0045	0.00015	0.00029	ø38×40
NCS HS11011b	Pure iron	Sn	As	B	Ca	Co	N	V	Al	Bi	Mg	Ti	
		0.00015	0.0026	0.00023	0.0003	0.0012	0.0045	(<0.0001)	(<0.0001)	(<0.00001)	(0.00006)	(<0.0001)	
NCS HS11011b	Pure iron	Pb	Nb	W	Ta	Ce#	Hf#	La#	Se#	Cd#	Te#	Zr#	
		(0.00002)	(0.00004)	(0.00004)	(<0.00001)	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Zr	B	
NCS HS 11706-3	Silicon Steel	0.106	1.03	0.546	0.045	0.029	0.187	0.571	0.146	0.026	0.017	0.012	ø38×30
NCS HS 11706-5	Silicon Steel	0.040	4.16	1.10	0.020	0.031	0.042	0.101	0.063	0.010	0.0035	0.0054	ø38×30
NCS HS 11706-3	Silicon Steel	Sn	Sb	N	Als	Al <sub>i</sub>							
		0.019	0.0012	(0.0058)	0.779	0.783							
NCS HS 11706-5	Silicon Steel	0.0055	0.022	0.0026	0.065	0.068							
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	
NCS HS 11708a-1	Alloy structure steel	0.200	0.222	0.680	0.038	0.0084	2.97	3.53	0.355	0.210	0.189	0.161	ø38×30
NCS HS 11708a-2	Alloy structure steel	0.144	0.132	3.60	0.053	0.074	0.95	4.33	0.016	0.019	0.478	0.226	ø38×30
NCS HS 11708a-3	Alloy structure steel	0.288	0.290	0.89	0.035	0.027	2.27	1.29	0.136	0.556	0.346	0.296	ø38×30
NCS HS 11708a-4	Alloy structure steel	0.046	0.051	2.42	0.048	0.017	4.40	2.54	0.441	1.40	0.449	0.035	ø38×30
NCS HS 11708a-5	Alloy structure steel	0.251	0.605	1.04	0.025	0.031	1.36	1.77	0.046	0.864	0.118	0.073	ø38×30
NCS HS 11708a-6	Alloy structure steel	0.315	0.391	1.88	0.029	0.049	3.27	1.02	0.245	0.118	0.273	0.136	ø38×30
NCS HS 11708a-7	Alloy structure steel	0.505	1.10	0.325	0.0062	0.065	0.703	0.773	0.518	0.305	0.013	0.028	ø38×30
NCS HS 11708a-8	Alloy structure steel	0.425	0.830	0.553	0.017	0.0009	0.177	0.621	0.636	0.423	0.055	0.061	ø38×30
NCS HS 11708a-1	Alloy structure steel	W	Alt	As	Sn	Pb	B	Ce	N				
		0.429	0.016	0.048	0.048	(0.0008)	0.0064	(0.0002)	0.014				
NCS HS 11708a-2	Alloy structure steel	0.092	0.012	0.054	0.057	(0.0003)	0.0006		0.007				
NCS HS 11708a-3	Alloy structure steel	0.804	0.100	0.021	0.017	0.0034	0.0029		0.0085				
NCS HS 11708a-4	Alloy structure steel	1.98	0.0067	0.032	0.036	0.0015	0.0016	(0.0001)	0.020				
NCS HS 11708a-5	Alloy structure steel	1.23	0.0098	0.093	0.011	0.0024	0.0055	(0.00009)	0.010				
NCS HS 11708a-6	Alloy structure steel	0.201	0.147	0.056	0.027	(0.0002)	0.0096		0.015				
NCS HS 11708a-7	Alloy structure steel	0.602	0.311	0.0067	0.0042	0.0019	0.025	(0.0001)	0.0027				
NCS HS 11708a-8	Alloy structure steel	0.362	0.602	0.0086	0.0087	0.0013	0.019	0.045	0.0028				
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	W	Mo	
NCS HS 11709a-2	Stainless Steel	0.139	0.555	1.06	0.022	0.013	14.37	14.58	0.133	0.475	0.577	0.305	ø38×30
NCS HS 11709a-3	Stainless Steel	0.183	0.352	0.981	0.015	0.0098	10.66	19.13	0.057	0.577	0.735	0.606	ø38×30
NCS HS 11709a-4	Stainless Steel	0.060	0.971	0.704	0.035	0.032	19.73	11.24	0.258	0.253	0.198	0.169	ø38×30
NCS HS 11709a-5	Stainless Steel	0.224	0.154	1.92	0.0057	0.0045	7.65	22.77	0.014	0.774	0.432	0.809	ø38×30
NCS HS 11709a-6	Stainless Steel	0.027	1.06	0.595	0.057	0.042	24.40	7.34	0.326	0.170	0.078	0.053	ø38×30
NCS HS11709a-2	Stainless Steel	Co	Sn	As	Pb	Al <sub>t</sub>							
		0.166	0.015	0.021	0.00017	0.029							
NCS HS 11709a-3	Stainless Steel	0.222	0.0089	0.024	0.00013	0.019							
NCS HS 11709a-4	Stainless Steel	0.078	0.033	0.011	0.00030	0.096							
NCS HS 11709a-5	Stainless Steel	0.131	0.0027	0.030	0.0003	0.015							
NCS HS 11709a-6	Stainless Steel	0.031	0.042	0.0066	0.0002	0.174							

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Mg	Sn	N	
NCSHS 11712a-1	Nitrogen Cast Iron	1.75	3.40	0.080	0.580	0.119	2.48	0.030	0.025	0.031	0.021	0.0006	0.0031	0.015	ø28×30
NCSHS 11712a-2	Nitrogen Cast Iron	2.22	2.44	0.301	0.043	0.058	2.13	0.341	0.458	0.087	0.055	0.0085	0.044	0.024	ø28×30
NCSHS 11712a-3	Nitrogen Cast Iron	2.55	1.50	0.878	0.071	0.045	0.417	0.519	0.641	0.354	0.085	0.024	0.021	0.024	ø28×30
NCSHS 11712a-4	Nitrogen Cast Iron	3.16	1.96	0.462	0.396	0.017	1.40	0.778	0.921	0.428	0.166	0.025	0.024	0.0073	ø28×30
NCSHS 11712a-5	Nitrogen Cast Iron	3.52	1.17	0.311	0.420	0.019	0.766	1.03	0.389	0.629	0.324	0.021	0.013	0.0047	ø28×30
NCSHS 11712a-6	Nitrogen Cast Iron	4.02	0.163	1.41	0.021	0.026	0.112	1.89	1.83	0.726	0.509	0.104	0.057	0.013	ø28×30
NCSHS 11712a-7	Nitrogen Cast Iron	3.94	0.918	1.38	0.085	0.0048	1.05	1.37	1.10	0.168	0.309	0.056	0.134	0.0063	ø28×30
			Ti	Al	La	Ce									
NCSHS 11712a-1	Nitrogen Cast Iron	0.038	0.248	<0.0001	<0.0001										
NCSHS 11712a-2	Nitrogen Cast Iron	0.065	0.060	0.010	0.0010										
NCSHS 11712a-3	Nitrogen Cast Iron	0.027	0.034	0.0061	0.027										
NCSHS 11712a-4	Nitrogen Cast Iron	0.065	0.0073	<0.0001	<0.0001										
NCSHS 11712a-5	Nitrogen Cast Iron	0.161		<0.0001	<0.0001										
NCSHS 11712a-6	Nitrogen Cast Iron	0.238	0.019	<0.0001	<0.0001										
NCSHS 11712a-7	Nitrogen Cast Iron	0.114	0.214	<0.0001	<0.0001										
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Nb	W	Co	
NCS HS11714a-1	Medium-Low Alloy Steel	1.17	0.394	1.91	0.0052	0.034	4.48	0.063	0.097	0.045	0.033	0.302	0.42	0.031	D38×30
NCS HS11714a-2	Medium-Low Alloy Steel	0.075	0.97	0.131	0.027	0.012	1.99	1.23	1.19	0.253	0.24	0.191	1.94	0.172	D38×30
NCS HS11714a-3	Medium-Low Alloy Steel	0.921	1.17	1.14	0.011	0.065	3.39	0.301	0.628	0.478	0.061	0.272	0.754	0.508	D38×30
NCS HS11714a-4	Medium-Low Alloy Steel	0.44	1.99	0.793	0.033	0.027	1.06	0.91	2.05	0.338	0.498	0.142	1.58	0.25	D38×30
NCS HS11714a-5	Medium-Low Alloy Steel	0.73	0.113	1.58	0.055	0.0051	0.215	0.606	4.57	0.607	0.114	0.016	0.027	0.073	D38×30
NCS HS11714a-6	Medium-Low Alloy Steel	0.249	0.85	0.402	0.04	0.017	0.6	1.49	2.95	0.123	0.388	0.045	1.17	0.361	D38×30
			Ti	Al	La	Ce									
NCS HS11714a-1	Medium-Low Alloy Steel	0.478	0.489	0.223	0.226	0.02	0.026	0.0073	0.0012	0.0006	0.0004	0.0054	0.0007	(0.0004)	
NCS HS11714a-2	Medium-Low Alloy Steel	0.188	0.19	0.77	0.78	0.0094	0.011	0.0012	0.0004	0.00007#	(0.0002)	0.024	<0.0001#	(0.0005)	
NCS HS11714a-3	Medium-Low Alloy Steel	0.319	0.322	0.071	0.072	0.013	0.017	0.0017	0.0069	(0.0001)	0.0003	0.0064	0.0004	(0.0005)	
NCS HS11714a-4	Medium-Low Alloy Steel	0.029	0.03	0.025	0.026	0.0051	0.0063	0.0012	(0.0007)	(0.0006)	0.0019	0.0019	<0.0001*	(0.0005)	
NCS HS11714a-5	Medium-Low Alloy Steel	0.078	0.078	1.13	1.14	(0.0002)	(0.0004)	0.0031	0.0018	0.003	0.0082	0.218	(0.0001)	(0.0004)	
NCS HS11714a-6	Medium-Low Alloy Steel	0.107	0.11	0.542	0.552	0.0007	0.0007	0.0012	0.0106	0.0011	0.0082	0.113	0.0006	(0.0005)	
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Co	Als	Alt	
NCSHS 11715a-1	Stainless Steel	0.298	1.89	2.56	0.0069	0.0037	27.89	23.11	0.791	0.483	0.558	0.039	(0.004)	(0.006)	ø36×30
NCSHS 11715a-2	Stainless Steel	0.084	0.289	0.629	0.033	0.020	23.62	4.68	0.282	1.10	0.087	0.459	1.77	1.80	ø36×30
NCSHS 11715a-3	Stainless Steel	0.040	0.652	0.821	0.021	0.021	20.62	8.72	1.41	0.069	0.252	0.229	0.344	0.351	ø36×30
NCSHS 11715a-4	Stainless Steel	0.011	0.980	1.19	0.026	0.028	17.94	12.11	4.13	2.13	0.440	0.158	0.085	0.088	ø36×30
NCSHS 11715a-5	Stainless Steel	0.0052	0.112	0.221	0.051	0.037	15.39	15.02	0.458	0.281	0.106	0.212	1.21	1.22	ø36×30
NCSHS 11715a-6	Stainless Steel	0.213	1.50	1.91	0.019	0.044	11.14	19.01	3.05	2.93	0.319	0.075	0.034	0.037	ø36×30
			Ti	Nb	W	As	Sn	Pb	N						
NCSHS 11715a-1	Stainless Steel	0.080	0.077	(0.0007)	0.0007	0.0005	(0.00005)	0.027							
NCSHS 11715a-2	Stainless Steel	(0.280)	2.42	0.217	0.0095	0.023	(0.00009)	(0.064)							
NCSHS 11715a-3	Stainless Steel	0.562	0.494	0.311	0.018	0.012	(0.0003)	0.019							
NCSHS 11715a-4	Stainless Steel	0.170	1.04	0.544	0.0066	0.0029	(0.0004)	0.0091							
NCSHS 11715a-5	Stainless Steel	(0.623)	0.173	0.709	0.016	0.014	0.0008	(0.020)							
NCSHS 11715a-6	Stainless Steel	0.742	1.41	0.160	0.0058	0.018	(0.0002)	0.0058							

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Nb	Alt	
NCSHS 11716a-1	High Chromium Cast Iron	1.8	2.72	0.687	0.106	0.046	32.6	0.272	0.314	0.217	0.081	0.201	0.12	0.075	ø33x21
NCSHS 11716a-2	High Chromium Cast Iron	1.99	1.12	1.19	0.051	0.015	10.97	0.319	1.34	0.15	0.04	0.716	0.272	0.051	ø33x21
NCSHS 11716a-3	High Chromium Cast Iron	3.35	1.42	1.25	0.056	0.046	25.83	0.662	0.877	0.447	0.188	0.461	0.068	0.141	ø33x21
NCSHS 11716a-4	High Chromium Cast Iron	2.63	0.572	2.09	0.021	0.05	14.64	1.49	1.64	0.086	0.086	3.51	0.261	0.139	ø33x21
NCSHS 11716a-5	High Chromium Cast Iron	2.27	0.713	1.4	0.186	0.046	18.28	2.16	0.884	0.607	0.028	2.42	0.437	0.044	ø33x21
NCSHS 11716a-6	High Chromium Cast Iron	3.02	1.72	1.76	0.249	0.093	23.76	0.811	0.617	0.479	0.114	1.29	0.128	0.18	ø33x21
		Co	W												
NCSHS 11716a-1	High Chromium Cast Iron	0.037	0.29												
NCSHS 11716a-2	High Chromium Cast Iron	0.018	0.352												
NCSHS 11716a-3	High Chromium Cast Iron	0.357	0.519												
NCSHS 11716a-4	High Chromium Cast Iron	0.124	0.025												
NCSHS 11716a-5	High Chromium Cast Iron	0.031	0.071												
NCSHS 11716a-6	High Chromium Cast Iron	0.206	0.18												
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Co	Pb	
NCS HS 11718a-1	Alloy Cast Iron	1.84	3.52	1.52	0.036	0.060	0.815	0.740	0.085	0.071	0.107	0.082	0.0059	0.0008	ø32X20
NCS HS 11718a-2	Alloy Cast Iron	2.53	2.59	1.04	0.066	0.029	1.49	0.118	1.79	0.153	0.158	0.042	0.0062	0.0008	ø32X20
NCS HS 11718a-3	Alloy Cast Iron	3.70	2.04	0.520	0.270	0.039	0.211	0.288	0.767	0.600	0.059	0.140	0.0027	0.0010	ø32X20
NCS HS 11718a-4	Alloy Cast Iron	3.32	1.47	0.762	0.151	0.017	0.523	0.489	1.03	0.791	0.322	0.160	0.0037	0.0004	ø32X20
NCS HS 11718a-5	Alloy Cast Iron	2.88	1.01	0.331	0.703	0.172	1.98	1.53	0.407	0.301	0.066	0.033	0.011	0.0002	ø32X20
NCS HS 11718a-6	Alloy Cast Iron	4.03	0.570	0.103	0.042	0.019	0.058	1.20	1.26	1.18	0.579	0.057	0.020	0.0004	ø32X20
		As	Alt	W	Nb	Sb	B	Sn							
NCS HS 11718a-1	Alloy Cast Iron	0.012	0.018	0.76	0.114	0.103	0.0078	0.098							
NCS HS 11718a-2	Alloy Cast Iron	0.030	0.098	0.076	0.068	0.0041	0.012	0.034							
NCS HS 11718a-3	Alloy Cast Iron	0.0080	0.113	0.025	0.250	0.084	0.043	0.143							
NCS HS 11718a-4	Alloy Cast Iron	0.013	0.154	0.283	0.5114	0.084	0.071	0.0068							
NCS HS 11718a-5	Alloy Cast Iron	0.016	0.058	0.494	0.045	0.025	0.026	0.069							
NCS HS 11718a-6	Alloy Cast Iron	0.0053	0.172	0.103	0.092	0.198	0.072	0.051							
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	Al	V	Sb	
NCS HS 11722-1	Ductile Cast Iron	2.12	3.88	0.26	0.38	0.004	0.040	0.026	0.77	0.21	0.37	0.17	0.031	0.003	ø36X15
NCS HS 11722-2	Ductile Cast Iron	2.46	1.44	1.09	0.074	0.035	0.083	0.025	0.56	1.51	0.143	0.070	0.067	0.052	ø36X15
NCS HS 11722-3	Ductile Cast Iron	3.62	1.85	0.60	0.049	0.012	0.069	0.017	0.38	0.76	0.13	0.094	0.10	0.094	ø36X15
NCS HS 11722-4	Ductile Cast Iron	3.24	2.84	0.46	0.049	0.016	0.093	0.078	0.16	0.24	0.082	0.083	0.11	0.038	ø36X15
NCS HS 11722-5	Ductile Cast Iron	2.70	2.03	0.77	0.16	0.087	0.045	0.023	0.12	1.23	0.20	0.13	0.30	0.12	ø36X15
NCS HS 11722-6	Ductile Cast Iron	4.04	0.88	0.89	0.29	0.14	0.13	0.035	0.079	0.61	0.053	0.044	0.50	0.20	ø36X15
		Sn	Mg	La	Ce										
NCS HS 11722-1	Ductile Cast Iron	0.30	0.07	0.06	0.20										
NCS HS 11722-2	Ductile Cast Iron	0.24	0.041	0.018	0.062										
NCS HS 11722-3	Ductile Cast Iron	0.18	0.060	0.045	0.11										
NCS HS 11722-4	Ductile Cast Iron	0.090	0.033	0.002	0.004										
NCS HS 11722-5	Ductile Cast Iron	0.065	0.004	(0.0005)	(0.003)										
NCS HS 11722-6	Ductile Cast Iron	0.016	0.007	(0.0005)	(0.003)										

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Als	Alt	Tis	
NCS HS 11719-1	Carbon steel	0.963	0.241	0.586	0.022	0.010	0.131	0.206	0.111	0.035	0.017	0.019	0.015	ø38×30
NCS HS 11719-2	Carbon steel	0.042	0.154	0.048	0.105	0.0053	0.247	0.432	0.411	0.207	0.292	0.296	0.154	ø38×30
NCS HS 11719-3	Carbon steel	0.435	0.163	1.14	0.045	0.020	0.086	0.114	0.160	0.099	0.016	0.019	0.023	ø38×30
NCS HS 11719-4	Carbon steel	0.140	0.526	1.30	0.084	0.020	0.198	0.344	0.276	0.153	0.155	0.160	0.128	ø38×30
NCS HS 11719-5	Carbon steel	1.19	0.751	2.20	0.011	0.013	0.439	0.164	0.046	0.0082	0.034	0.036	0.028	ø38×30
NCS HS 11719-6	Carbon steel	0.0060	0.014	0.163	0.0053	0.035	0.021	0.013	0.0032	0.363	0.0016	0.0021	0.0008	ø38×30
NCS HS 11719-7	Carbon steel	0.0048	0.055	0.145	0.0076	0.069	0.061	0.048	0.018	0.362	0.0011	0.0014	0.0012	ø38×30
		Tit												
NCS HS 11719-1	Carbon steel	0.016												
NCS HS 11719-2	Carbon steel	0.161												
NCS HS 11719-3	Carbon steel	0.024												
NCS HS 11719-4	Carbon steel	0.132												
NCS HS 11719-5	Carbon steel	0.029												
NCS HS 11719-6	Carbon steel	0.0010												
NCS HS 11719-7	Carbon steel	0.0014												
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Als	Alt	Ti	
NCS HS11717a-1	Micro Alloy Steel	0.0023	0.0054	0.018	0.012	0.0027	0.023	0.0053	0.011	0.0036	0.0069	0.0078	0.0002	D38×30
NCS HS11717a-3	Micro Alloy Steel	0.032	1.55	0.303	0.018	0.067	0.236	0.034	0.563	0.403	0.295	0.298	0.049	D38×30
NCS HS11717a-4	Micro Alloy Steel	0.096	1.09	0.669	0.012	(0.05)	0.102	0.144	0.4	0.316	0.214	0.216	0.202	D38×30
NCS HS11717a-5	Micro Alloy Steel	0.243	0.769	1.04	0.03	0.042	0.106	0.105	0.393	0.248	0.101	0.104	0.178	D38×30
NCS HS11717a-6	Micro Alloy Steel	0.387	0.436	1.47	0.038	0.03	0.409	0.071	0.206	0.167	0.05	0.051	0.124	D38×30
NCS HS11717a-7	Micro Alloy Steel	0.498	0.176	2.1	0.05	0.022	0.612	0.196	0.107	0.075	0.022	0.024	0.088	D38×30
		V	Co	Nb	Pb	Sn	As	Sb	Bi	Ca	Bs	Bt	N	
NCS HS11717a-1	Micro Alloy Steel	-0.0001	0.0015	(<0.0005)	(<0.0001)	0.0002	0.0034	0.00041	(<0.00001)	0.0001#	0.0002	0.0004	0.0016	
NCS HS11717a-2	Micro Alloy Steel	0.011	0.058	0.031	(<0.0001)	0.0073	0.011	0.00031	(<0.00001)	0.0001#	0.0011	0.0012	0.0017	
NCS HS11717a-3	Micro Alloy Steel	0.052	0.099	0.079	(<0.0001)	0.016	0.019	0.00041	(<0.00001)	0.0001#	0.0018	0.002	0.0032	
NCS HS11717a-4	Micro Alloy Steel	0.098	0.146	0.223	(0.0001)	0.049	0.073	0.00044	(0.00001)	0.0001#	0.0085	0.0096	0.0031	
NCS HS11717a-5	Micro Alloy Steel	0.257	0.296	0.318	(<0.0001)	0.099	0.071	0.00052	(0.00001)	0.0001#	0.0071	0.0074	0.0048	
NCS HS11717a-6	Micro Alloy Steel	0.201	0.248	0.106	(<0.0001)	0.151	0.045	0.00048	(0.00001)	0.0001#	0.0047	0.0049	0.0049	
NCS HS11717a-7	Micro Alloy Steel	0.147	0.198	0.153	(<0.0001)	0.197	0.034	0.0005	(0.00001)	0.0001#	0.0031	0.0033	0.0063	
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Als	Alt	Ti	
NCS HS11717b-1	Micro Alloy Steel	0.452	0.161	0.414	0.035	0.017	0.212	0.157	0.432	0.155	0.074	0.075	0.11	D38×30
NCS HS11717b-2	Micro Alloy Steel	0.011	1.6	0.646	0.043	0.0049	0.127	0.208	0.236	0.116	0.3	0.302	0.071	D38×30
NCS HS11717b-3	Micro Alloy Steel	0.028	0.822	1.96	0.049	0.048	0.64	0.306	0.125	0.026	0.279	0.283	0.028	D38×30
NCS HS11717b-4	Micro Alloy Steel	0.0025	0.168	0.176	0.0084	0.0061	0.098	0.071	0.048	0.279	0.012	0.013	0.206	D38×30
NCS HS11717b-5	Micro Alloy Steel	0.078	0.567	1.64	0.015	0.011	0.436	0.257	0.332	0.048	0.029	0.03	0.191	D38×30
NCS HS11717b-6	Micro Alloy Steel	0.236	0.122	1.05	0.021	0.022	0.374	0.104	0.104	0.236	0.061	0.061	0.159	D38×30
NCS HS11717b-7	Micro Alloy Steel	0.369	0.065	0.117	0.0075	0.043	0.077	0.029	0.21	0.367	0.238	0.242	0.299	D38×30
		V	Co	Nb	Pb	Sn	As	Sb	Bi	Ca	Bs	Bt	N	
NCS HS11717a-1	Micro Alloy Steel	0.01	0.145	0.125	0.0012	0.039	0.016	0.028	0.0006	0.0001#	0.015	0.016	0.0039	
NCS HS11717a-2	Micro Alloy Steel	0.062	0.21	0.056	0.0005	0.027	0.021	0.016	0.0015	0.0008	0.0019	0.0024	0.004	
NCS HS11717a-3	Micro Alloy Steel	0.149	0.021	0.24	0.0038	0.069	0.0022	0.01			0.0031	0.0033	0.023	
NCS HS11717a-4	Micro Alloy Steel	0.215	0.236	0.038	0.0009	0.0016	0.039	0.0087	0.0007	0.0001#	0.0018	0.002	0.0037	
NCS HS11717a-5	Micro Alloy Steel	0.105	0.042	0.014	0.0051	0.012	0.01	0.0051	0.0003	0.0002	0.011	0.012	0.006	
NCS HS11717a-6	Micro Alloy Steel	0.042	0.087	0.065		0.015	0.012	0.0022	0.0002	0.0004	0.0056	0.0059	0.0063	
NCS HS11717a-7	Micro Alloy Steel	0.326	0.296	0.303	0.0003	0.103	0.098	0.0004			0.0005	0.0006	0.0035	

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Co	Mo	V	B	Ti	
NCS HS 11720-1	High Manganese Alloy	1.96	0.348	22.96	0.188	0.0063	3.01	0.045	0.025	0.0094	0.0095	0.034	0.0021	0.0041	ø30×24
NCS HS 11720-2	High Manganese Alloy	1.61	0.652	10.66	0.052	0.054	0.467	0.328	0.221	0.010	0.118	0.132	0.0038	0.047	ø30×24
NCS HS 11720-3	High Manganese Alloy	1.16	1.16	16.75	0.077	0.055	0.257	0.152	0.143	0.091	0.589	0.53	0.0013	0.03	ø30×24
NCS HS 11720-4	High Manganese Alloy	1.06	1.47	15.04	0.044	0.059	1.45	1.66	0.089	0.0093	0.881	0.567	0.0023	0.013	ø30×24
NCS HS 11720-5	High Manganese Alloy	0.75	1.01	12.2	0.118	0.037	0.68	0.838	0.449	0.007	0.302	0.273	0.0009	0.018	ø30×24
NCS HS 11720-6	High Manganese Alloy	2.38	1.69	5.36	0.029	0.108	0.084	3.43	0.474	0.107	1.51	0.837	0.017	0.218	ø30×24
N															
NCS HS 11720-1	High Manganese Alloy	0.091													
NCS HS 11720-2	High Manganese Alloy	0.054													
NCS HS 11720-3	High Manganese Alloy	0.033													
NCS HS 11720-4	High Manganese Alloy	0.072													
NCS HS 11720-5	High Manganese Alloy	0.026													
NCS HS 11720-6	High Manganese Alloy	0.016													
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Co	Cu	Ti	V	Alt	
NCS HS 11721-1	Stainless Steel	0.583	1.1	1.47	0.033	0.032	8.55	1.98	1.86	0.289	0.321	0.463	0.329	0.248	ø38×30
NCS HS 11721-2	Stainless Steel	0.371	0.958	1.17	0.03	0.053	10.08	1.43	0.503	0.276	0.279	0.694	0.298	0.196	ø38×30
NCS HS 11721-3	Stainless Steel	0.189	0.76	0.882	0.019	0.021	2.09	0.638	0.734	0.213	0.217	0.369	0.189	0.091	ø38×30
NCS HS 11721-4	Stainless Steel	0.093	0.506	0.531	0.029	0.026	17.43	0.632	0.089	0.176	0.169	0.288	0.241	0.124	ø38×30
NCS HS 11721-5	Stainless Steel	0.052	0.584	0.675	0.022	0.027	21.49	1.01	0.263	0.126	0.12	0.141	0.142	0.026	ø38×30
NCS HS 11721-6	Stainless Steel	0.0021	0.301	0.366	0.011	0.014	26.29	0.37	1.03	0.074	0.072	0.092	0.099	0.0065	ø38×30
NCS HS 11721-7	Stainless Steel	0.0014	0.117	0.198	0.0064	0.0055	28.38	0.04	1.57	0.0085	0.0045	0.0053	0.016	0.0026	ø38×30
As Sn Pb N Nb															
NCS HS 11721-1	Stainless Steel	0.0027	0.0042	(0.0002)	0.0084	0.55									
NCS HS 11721-2	Stainless Steel	0.0051	0.01	0.00037	0.0081	0.763									
NCS HS 11721-3	Stainless Steel	0.017	0.039	0.0009	0.015	0.387									
NCS HS 11721-4	Stainless Steel	0.022	0.034	(0.0002)	0.023	0.291									
NCS HS 11721-5	Stainless Steel	0.013	0.026	0.0007	0.037	0.137									
NCS HS 11721-6	Stainless Steel	0.024	0.017	0.0007	0.043	0.092									
NCS HS 11721-7	Stainless Steel	0.036	0.051	0.0021	0.01	0.009									
Number	Name	Chemical Composition(Percent)											Unit Size (mm)		
		C	Si	Mn	P	S	Cr	Mo	W	V	B <sub>1</sub>	B <sub>2</sub>			
NCS HS 13704-1	12CrMoWB	0.068	0.510	1.096	0.012	0.047	0.281	1.46	0.298	0.394	0.0012	0.0010			ø35×25
NCS HS 13704-2	12CrMoWB	0.100	0.290	0.853	0.016	0.071	0.486	1.19	0.438	0.206	0.0021	0.0016			ø35×25
NCS HS 13704-3	12CrMoWB	0.176	0.272	0.585	0.023	0.028	0.775	0.747	0.796	0.251	0.0038	0.0030			ø35×25
NCS HS 13704-4	12CrMoWB	0.193	0.173	0.396	0.039	0.027	1.19	0.472	1.44	0.061	0.0068	0.0058			ø35×25
NCS HS 13704-5	12CrMoWB	0.256	0.055	0.269	0.048	0.010	1.46	0.301	1.94	0.041	0.0090	0.0081			ø35×25
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Co	Als	Alt	
NCS HS11012	Nodular Cast Iron	3.61	2.43	0.471	0.05	0.018	0.294	0.104	0.227	0.254	0.405	0.042	0.14	0.141	Φ32×28
NCS HS11013	Nodular Cast Iron	3.7	2.29	0.305	0.038	0.004	0.033	0.047	0.001	0.431	0.126	0.003	0.031	0.032	Φ32×28
Ti As Sn Nb B Mg La Ce Sb															
NCS HS11012	Nodular Cast Iron	0.093	0.0046	0.1	0.014	0.061	0.037	0.0087	0.039	0.06					
NCS HS11013	Nodular Cast Iron	0.033	0.0019	0.024	(0.0006)	0.0015	0.049	0.012	0.046	0.02					

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(%)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	V	Ni	Cu	Mo	Als	Alt	
NCS HS11725-1	Oriented Silicon Steel	0.0084	2.06	0.066	0.0091	0.0034	0.047	0.0063	0.044	0.041	0.0045	0.0056	0.0061	ø38×20
NCS HS11725-2	Oriented Silicon Steel	0.032	2.91	0.101	0.011	0.018	0.056	0.028	0.049	0.049	0.015	0.019	0.02	ø38×20
NCS HS11725-3	Oriented Silicon Steel	0.053	3.27	0.202	0.015	0.0079	0.067	0.0048	0.084	0.189	0.0057	0.021	0.023	ø38×20
NCS HS11725-4	Oriented Silicon Steel	0.059	3.3	0.158	0.021	0.033	0.054	0.016	0.093	0.109	0.027	0.03	0.031	ø38×20
NCS HS11725-5	Oriented Silicon Steel	0.1	4.12	0.316	0.03	0.045	0.097	0.037	0.105	0.305	0.066	0.046	0.047	ø38×20
		Ti	Nb	B	Sn	Zr	Sb	As	Pb					
NCS HS11725-1	Oriented Silicon Steel	0.0023	0.0053	0.0005	0.0049	0.0002*	0.0004*	0.0035	<0.0001#					
NCS HS11725-2	Oriented Silicon Steel	0.0044	0.027	0.0011	0.0084	0.0032	0.0004*	0.0054	<0.0001#					
NCS HS11725-3	Oriented Silicon Steel	0.0036	0.0054	0.0008	0.066	0.0007	0.0004*	0.0031	<0.0001#					
NCS HS11725-4	Oriented Silicon Steel	0.01	0.016	0.0015	0.029	0.0032	0.0004*	0.01	<0.0001#					
NCS HS11725-5	Oriented Silicon Steel	0.012	0.036	0.0024	0.079	0.014	0.0004*	0.034	<0.0001#					
Number	Name	Chemical Composition(%)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	V	Ni	Cu	Als	Ti	Nb	
NCS HS11726-1	Non-oriented Silicon Steel	0.0094	0.375	0.302	0.073	0.0081	0.024	0.0021	0.0098	0.012	0.24	0.0059	0.0008	ø38×30
NCS HS11726-2	Non-oriented Silicon Steel	0.011	1.83	0.259	0.011	0.011	0.085	0.0039	0.191	0.0088	0.498	0.011	0.011	ø38×30
NCS HS11726-3	Non-oriented Silicon Steel	0.02	3.09	0.576	0.013	0.0049	0.047	0.009	0.023	0.024	0.713	0.0076	0.003	ø38×30
NCS HS11726-4	Non-oriented Silicon Steel	0.032	0.85	1.45	0.056	0.018	0.067	0.015	0.023	0.024	0.0004#	0.0048	0.004	ø38×30
NCS HS11726-5	Non-oriented Silicon Steel	0.038	1.42	0.393	0.015	0.022	0.08	0.021	0.015	0.034	0.037	0.0032	0.0059	ø38×30
NCS HS11726-6	Non-oriented Silicon Steel	0.035	2.24	2.01	0.014	0.014	0.059	0.024	0.01	0.025	1.18	0.0098	0.013	ø38×30
NCS HS11726-7	Non-oriented Silicon Steel	0.061	0.074	0.876	0.145	0.012	0.101	0.013	0.016	0.029	1.51	0.023	0.011	ø38×30
NCS HS11726-8	Non-oriented Silicon Steel	0.004	0.205	0.225	0.176	0.0065	0.134	0.011	0.0053	0.044	0.089	0.028	0.004	ø38×30
		B	Sn	Zr	Sb									
NCS HS11726-1	Non-oriented Silicon Steel	0.0006	0.0015	0.001	0.0013									
NCS HS11726-2	Non-oriented Silicon Steel	0.0008	0.0028	0.002	0.0004*									
NCS HS11726-3	Non-oriented Silicon Steel	0.0015	0.0088	0.015	0.0024									
NCS HS11726-4	Non-oriented Silicon Steel	0.0031	0.011	0.001	0.0046									
NCS HS11726-5	Non-oriented Silicon Steel	0.002	0.02	0.0019	0.0064									
NCS HS11726-6	Non-oriented Silicon Steel	0.0065	0.03	0.019	0.0004*									
NCS HS11726-7	Non-oriented Silicon Steel	0.009	0.05	0.002	0.011									
NCS HS11726-8	Non-oriented Silicon Steel	0.0027	0.0042	0.0027	0.0003*									
Number	Name	Chemical Composition(%)												Unit Size (mm)
		C	Si	Mn	P	S	Ti	Nb	V	Ni	Cr	Cu	As	
NCS HS14730	Wear resistant Steel	0.134	1.235	1.717	0.008	0.00066	0.019	0.0012	0.0017	0.011	0.028	0.023	0.0036	ø40×40
NCS HS14731	Silicon Steel	0.0036	1.411	0.583	0.013	0.0028	0.0022	0.0005	0.0008	0.0068	0.029	0.012	0.0033	ø40×40
NCS HS14732	High strength steel	0.09	0.139	1.853	0.0139	0.0017	0.127	0.0567	0.0052	0.0162	0.0389	0.053	0.0053	ø40×40
NCS HS14733	Silicon Steel	0.057	3.165	0.0947	0.023	0.0066	0.0024	0.00023	0.003	0.009	0.113	0.0158	0.0031	ø40×40
NCS HS14734	Silicon Steel	0.037	3.17	0.201	0.0091	0.0073	0.0025	0.0006	0.0008	0.0079	0.0168	0.491	0.0037	ø40×40
		Alt	Als	N	Mo	Sn	B	Sb	Pb	Ca*				
NCS HS14730	Wear resistant Steel	0.455	0.446	0.0048	0.0069	0.0015	0.0014*	0.0012*	0.0005*					
NCS HS14731	Silicon Steel	0.257	0.249	0.0015*	0.0039	0.0007	0.0005	0.0524*	0.0002*					
NCS HS14732	High strength steel	0.0352	0.0337	0.0045	0.164	0.004	0.00025*	0.0012*	0.0005*					
NCS HS14733	Silicon Steel	0.0274	0.0264	0.0087	0.0038	0.051	0.0005	0.0037	5	0.0001				
NCS HS14734	Silicon Steel	0.017	0.016	0.0088	0.0018	0.003		0.0009*		0.0006				

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)										Unit Size (mm)				
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Mo					
NCS HS 16704-1	38CrMoAl	0.196	0.447	0.543	0.0106	0.0101	2.22	0.460	0.082	0.383	0.476				ø32×48	
NCS HS 16704-2	38CrMoAl	0.141	0.581	0.790	0.0102	0.0100	1.86	0.103	0.054	0.508	0.341				ø32×48	
NCS HS 16704-3	38CrMoAl	0.370	0.239	0.469	0.0166	0.0492	1.58	0.197	0.463	0.790	0.148				ø32×48	
NCS HS 16704-4	38CrMoAl	0.706	0.224	0.196	0.0397	0.0375	1.97	0.479	0.07	0.247	0.391				ø32×48	
NCS HS 16704-5	38CrMoAl	0.238	0.364	0.546	0.0268	0.0104	1.16	0.067	0.295	0.962	0.092				ø32×48	
NCS HS 16704-6	38CrMoAl	0.532	0.310	0.421	0.0379	0.0093	0.99	0.045	0.120	1.38	0.044				ø32×48	
Number	Name	Chemical Composition(Percent)											Unit Size (mm)			
		C	Si	Mn	P	S	Cr	Ni	V	Ti	As	Mo				
NCS HS 19701-1	Pig Iron	2.45	0.099	0.072	0.011	0.019	0.513	0.183	0.009	0.006	0.005				ø30×30	
NCS HS 19701-2	Pig Iron	2.98	0.937	0.329	0.033	0.038	0.08	0.194	0.044	0.216	0.024				ø30×30	
NCS HS 19701-3	Pig Iron	3.29	0.689	1.22	0.044	0.056	0.03	0.045	0.071	0.043	0.009				ø30×30	
NCS HS 19701-4	Pig Iron	3.7	0.45	0.857	0.087	0.076	0.118	0.032	0.158	0.03	0.002	0.031			ø30×30	
NCS HS 19701-5	Pig Iron	3.67	0.18	0.596	0.072	0.117	0.17	0.504	0.335	0.066	0.002	0.68			ø30×30	
NCS HS 19701-6	Pig Iron	3.93	0.99	1.46	0.168	0.124	0.388	0.094	0.506	0.105	0.002	0.112			ø30×30	
NCS HS 19701-7	Pig Iron	4.13	1.85	2.06	0.306	0.111	0.157	0.026	0.822	0.403	0.043				ø30×30	
Number	Name	Chemical Composition(Percent)													Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	W	Mo	Co		
NCS HS 23703-1	Cr <sub>13</sub>	0.040	0.223	0.130	0.0062	0.0028	14.26	0.500	0.056	0.059	0.041	0.058	0.064	0.016	ø33×33	
NCS HS 23703-2	Cr <sub>13</sub>	0.245	0.420	0.337	0.0103	0.032	11.03	0.393	0.284	0.151	0.079	0.27	0.353	0.054	ø33×33	
NCS HS 23703-3	Cr <sub>13</sub>	0.159	0.568	0.495	0.0165	0.017	12.52	0.207	0.171	0.089	0.091	0.19	0.157	0.036	ø33×33	
NCS HS 23703-4	Cr <sub>13</sub>	0.340	0.772	0.740	0.0262	0.0054	9.37	0.461	0.374	0.201	0.371	0.38	0.244	0.078	ø33×33	
NCS HS 23703-5	Cr <sub>13</sub>	0.472	0.487	0.983	0.043	0.041	7.84	0.771	0.522	0.287	0.187	0.50	0.487	0.116	ø33×33	
Number	Name	Chemical Composition(Percent)										Unit Size (mm)				
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo					
NCS HS 23707a-1	GSiMnMoV	1.2	0.901	0.201	0.0036	0.048	0.108	0.454	0.514	0.045	0.086				ø35×35	
NCS HS 23707a-2	GSiMnMoV	0.471	0.318	0.922	0.03	0.031	0.351	0.146	0.113	0.151	0.452				ø35×35	
NCS HS 23707a-3	GSiMnMoV	0.176	0.083	1.25	0.043	0.011	0.45	0.107	0.086	0.434	0.563				ø35×35	
NCS HS 23707a-4	GSiMnMoV	0.936	0.747	0.511	0.012	0.0094	0.24	0.356	0.274	0.335	0.252				ø35×35	
NCS HS 23707a-5	GSiMnMoV	0.663	0.548	0.684	0.021	0.05	0.093	0.303	0.438	0.243	0.354				ø35×35	
Number	Name	Chemical Composition(Percent)														Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Alt	W	Co		
NCS HS 23716-1	Heat Die Steel	0.763	0.36	0.216	0.032	0.013	3.24	0.291	0.092	0.767	0.27	0.0069	1.45	0.028	ø35×30	
NCS HS 23716-2	Heat Die Steel	1.11	0.29	0.104	0.038	0.005	5.6	0.407	0.075	0.5	0.05	0.0051	2	0.009	ø35×30	
NCS HS 23716-3	Heat Die Steel	0.393	1.37	0.842	0.017	0.029	4.38	0.148	0.205	1.26	0.8	0.077	0.5	0.105	ø35×30	
NCS HS 23716-4	Heat Die Steel	0.599	0.08	0.432	0.021	0.034	3.84	0.199	0.136	0.946	0.66	0.019	0.97	0.049	ø35×30	
NCS HS 23716-5	Heat Die Steel	0.088	1.09	1.67	0.005	0.021	2.43	0.084	0.474	1.94	1.17	0.087	0.08	1.98	ø35×30	
NCS HS 23716-6	Heat Die Steel	0.2	0.65	1.21	0.01	0.045	4.91	0.095	0.301	1.61	1.01	0.084	0.2	1.49	ø35×30	
			Sn	Pb												
NCS HS 23716-1	Heat Die Steel	0.0075	0.011													
NCS HS 23716-2	Heat Die Steel	0.007	0.074													
NCS HS 23716-3	Heat Die Steel	0.0076	0.0087													
NCS HS 23716-4	Heat Die Steel	0.02	(0.0001)													
NCS HS 23716-5	Heat Die Steel	0.052	0.0053													
NCS HS 23716-6	Heat Die Steel	0.032	(0.0001)													

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)												Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	W	Co		
NCSHS 23717-1	Cold Die Steel	2.19	0.37	0.369	0.015	0.001	11.7	0.096	0.085	0.022	0.04	0.61	0.014	ø35×30	
NCSHS 23717-2	Cold Die Steel	1.57	0.29	0.333	0.019	0.014	11.5	0.194	0.172	0.574	0.64	0.47	0.064	ø35×30	
NCSHS 23717-3	Cold Die Steel	1.31	0.38	0.473	0.0072	0.023	10.1	0.094	0.131	0.854	0.48	0.69	0.035	ø35×30	
NCSHS 23717-4	Cold Die Steel	0.869	0.05	0.044	0.044	0.003	14.2	0.436	0.364	0.082	1.07	0.07	0.166	ø35×30	
NCSHS 23717-5	Cold Die Steel	1.88	0.18	0.16	0.03	0.005	12.7	0.297	0.228	0.333	0.82	0.31	0.096	ø35×30	
Number	Name	Chemical Composition(Percent)												Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Al		
NCS HS 23718-1	Middle-Low alloy	0.496	0.25	0.732	0.051	0.014	0.81	1.47	0.439	0.504	0.52	0.325	0.02	ø35×30	
NCS HS 23718-2	Middle-Low alloy	0.115	0.79	2.02	0.06	0.006	1.78	0.494	0.082	0.079	0.12	0.105	0.06	ø35×30	
NCS HS 23718-3	Middle-Low alloy	0.201	0.7	1.24	0.015	0.049	0.4	1.02	0.299	0.251	0.22	0.232	0.661	ø35×30	
NCS HS 23718-4	Middle-Low alloy	0.356	0.42	1.68	0.0042	0.089	1.35	0.238	0.144	0.107	0.34	0.402	0.142	ø35×30	
NCS HS 23718-5	Middle-Low alloy	0.657	0.15	0.463	0.033	0.025	2.29	0.117	0.07	0.974	0.06	0.497	0.27	ø35×30	
NCS HS 23718-6	Middle-Low alloy	0.048	0.07	0.102	0.018	0.003	0.1	2	0.561	0.686	0.03	0.011	0.569	ø35×30	
Number	Name	Chemical Composition(Percent)												Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Al	W		Co
NCS HS 23720-1	Middle-Low alloy	0.763	0.359	0.216	0.032	0.013	3.24	0.291	0.092	0.767	0.268	0.0069	1.45	0.028	ø35×30
NCS HS 23720-2	Middle-Low alloy	1.11	0.286	0.104	0.038	0.0047	5.60	0.407	0.075	0.50	0.053	0.0051	2.00	0.0086	ø35×30
NCS HS 23720-3	Middle-Low alloy	0.393	1.37	0.842	0.017	0.029	4.38	0.148	0.205	1.26	0.80	0.077	0.496	0.105	ø35×30
NCS HS 23720-4	Middle-Low alloy	0.599	0.080	0.432	0.021	0.034	3.94	0.199	0.136	0.946	0.66	0.019	0.97	0.049	ø35×30
NCS HS 23720-5	Middle-Low alloy	0.088	1.09	1.67	0.0050	0.021	2.43	0.084	0.474	1.94	1.17	0.087	0.082	1.98	ø35×30
NCS HS 23720-6	Middle-Low alloy	0.200	0.649	1.21	0.010	0.045	4.91	0.095	0.301	1.61	1.01	0.084	0.204	1.49	ø35×30
		Sn	Pb												
NCS HS 23720-1	Middle-Low alloy	0.0075	0.011												
NCS HS 23720-2	Middle-Low alloy	0.0070	0.074												
NCS HS 23720-3	Middle-Low alloy	0.0076	0.0087												
NCS HS 23720-4	Middle-Low alloy	0.020	(0.0001)												
NCS HS 23720-5	Middle-Low alloy	0.052	0.0053												
NCS HS 23720-6	Middle-Low alloy	0.032	(0.0001)												



## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Nb	Alt	
NCS HS28702a-1	Nodular Cast Iron	2.43	3.08	0.178	0.031	0.0037	1.98	3.7	1.35	2.06	0.45	0.057	0.054	0.007	ø30×30
NCS HS28702a-2	Nodular Cast Iron	2.86	1.67	0.384	0.042	0.0068	1.54	0.985	0.987	1.55	0.396	0.095	0.035	0.016	ø30×30
NCS HS28702a-3	Nodular Cast Iron	3.18	2.17	0.783	0.119	0.025	1.01	2.17	0.815	1	0.3	0.074	0.02	0.041	ø30×30
NCS HS28702a-4	Nodular Cast Iron	3.59	1.25	1.17	0.076	0.028	0.755	0.705	0.525	0.665	0.234	0.044	0.021	0.141	ø30×30
NCS HS28702a-5	Nodular Cast Iron	3.99	0.601	1.39	0.211	0.045	0.415	0.201	0.306	0.355	0.098	0.032	0.012	0.027	ø30×30
NCS HS28702a-6	Nodular Cast Iron	3.48	0.275	1.69	0.554	0.052	0.164	4.18	0.068	0.076	0.055	0.031	0.0041	0.0051	ø30×30
		Mg	Ce	B	As	Sb	Pb	La							
NCS HS28702a-1	Nodular Cast Iron	0.11		0.171	0.051	0.0073	0.002								
NCS HS28702a-2	Nodular Cast Iron	0.04	0.088	0.114	0.033	0.0062	0.0017	0.011							
NCS HS28702a-3	Nodular Cast Iron	0.033	0.0089	0.053	0.037	0.0052	0.0048	0.0017							
NCS HS28702a-4	Nodular Cast Iron	0.017	0.044	0.028	0.024	0.015	0.011	0.0074							
NCS HS28702a-5	Nodular Cast Iron	0.011	0.017	0.012	0.032	0.0071	0.0043	0.0024							
NCS HS28702a-6	Nodular Cast Iron	0.0039		0.0077	0.081	0.0022	0.0006								
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	N	Nb	Ti	
NCS HS 28706-1	Line steel	0.055	0.29	1.81	0.011	0.0024	0.283	0.201	0.116	0.0043	0.205	0.0053	0.103	0.022	ø40×40
NCS HS 28706-2	Line steel	0.058	0.202	1.41	0.0072	0.0063	0.049	0.012	0.0014	0.042	0.013	0.004	0.05	0.016	ø40×40
NCS HS 28706-3	Line steel	0.083	0.194	0.559	0.01	0.007	0.024	0.009	0.002	0.0009	0.02	0.0053	0.011	0.003	ø40×40
NCS HS 28706-4	Line steel	0.086	0.246	1.2	0.011	0.006	0.022	0.008	0.0012	0.0014	0.015	0.0059	0.022	0.01	ø40×40
NCS HS 28706-5	Line steel	0.105	0.325	1.31	0.0087	0.0041	0.023	0.0089	0.0013	0.038	0.016	0.0067	0.035	0.02	ø40×40
NCS HS 28706-6	Line steel	0.108	0.279	1.23	0.013	0.006	0.026	0.0061	0.001	0.0012	0.01	0.0074	0.023	0.01	ø40×40
		As	Alt	Als	Ca										
NCS HS 28706-1	Line steel	0.004	0.027	0.026	0.0009										
NCS HS 28706-2	Line steel	0.0032	0.028	0.026	0.0012										
NCS HS 28706-3	Line steel	0.0034	0.023	0.021	0.0017										
NCS HS 28706-4	Line steel	0.0043	0.016	0.015	0.0035										
NCS HS 28706-5	Line steel	0.0033	0.023	0.022	0.002										
NCS HS 28706-6	Line steel	0.0044	0.023	0.022	0.0013										
Number	Name	Chemical Composition(Percent)										Unit Size (mm)			
		C	Si	Mn	P	S	Cr	Ni	Cu	Al					
NCS HS 39701-1	Carbon Steel	0.108	0.029	1.15	0.0038	0.070	0.379	0.252	0.276	0.073				ø33×35	
NCS HS 39701-2	Carbon Steel	0.172	0.103	1.07	0.014	0.012	0.241	0.210	0.14					ø33×35	
NCS HS 39701-3	Carbon Steel	0.29	0.156	0.62	0.032	0.026	0.153	0.181	0.193					ø33×35	
NCS HS 39701-4	Carbon Steel	0.30	0.247	0.86	0.023	0.040	0.092	0.065	0.097					ø33×35	
NCS HS 39701-5	Carbon Steel	0.44	0.46	0.41	0.039	0.040	0.275	0.062	0.325	0.40				ø33×35	
NCS HS 39701-6	Carbon Steel	0.58	0.374	0.163	0.054	0.0033	0.34	0.343	0.38	0.463				ø33×35	
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Al <sub>i</sub>	B	Sb	Sn	
NCS HS 11759	Carbon Steel	0.101	0.249	0.400	0.043	0.030	0.068	0.066	0.086		0.264	0.0014		0.0024	ø37×45
NCS HS 11760	Carbon Steel	0.202	0.512	1.34	0.046	0.032	0.078	0.050	0.057		0.092	0.0012		0.0059	ø37×45
NCS HS 11763	Carbon Steel	0.543	0.361	0.663	0.024	0.024	0.169	0.164	0.118		0.089	0.621		0.0026	ø37×45
NCS HS 11764	Carbon Steel	0.235	0.318	0.632	0.037	0.028	0.076	0.103	0.106		0.071		0.14	0.024	ø37×40
NCS HS 11774	GCr <sub>15</sub>	1.02	0.250	0.340	0.015	0.023	1.48	0.036	0.037	0.022					ø36×50
		As	Pb												
NCS HS 11759	Carbon Steel	0.0058													
NCS HS 11760	Carbon Steel	0.012													
NCS HS 11763	Carbon Steel	0.012													
NCS HS 11764	Carbon Steel	0.15	0.0011												

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Ti	V	As	Sn	
NCS HS 11775	Alloy Steel	0.084	0.787	1.62	0.029	0.002	25.53	20.72							ø35×20
NCS HS 11782	Gray Iron	3.21	1.64	1.09	0.088	0.035	0.061	0.014	0.042	0.0048	0.027	0.0079	0.0065		ø31×28
NCS HS 11784	High phosphorus Cast Iron	3.3	2.68	0.528	0.78	0.031	0.812	0.024	0.015	0.142	0.084	0.02		0.0005	ø31×28
NCS HS 11785	High phosphorus Cast Iron	3.19	2.52	0.482	0.79	0.03	0.817	0.031	0.021	0.139	0.076	0.018		0.001	ø31×28
NCS HS 11786	High phosphorus Cast Iron	2.82	2.05	0.768	1.7	0.064	1.98	0.048	0.044	0.251	0.102	0.029		0.0062	ø31×28
NCS HS 11787	High Nickel pig Iron	2.65	2.07	1.08	0.067	0.037	1.98	19.84	0.306	0.0014	0.022	0.0096	0.0075	0.0054	ø31×28
NCS HS 11788	High Nickel pig Iron	2.97	3.29	1.62	0.191	0.01	2.56	17.77	0.51	0.0013	0.043	0.017	0.014	0.0003	ø31×28
NCS HS 11789	High Nickel pig Iron	1.97	2.58	1.08	0.048	0.076	2.51	17.8	6.39	0.062	0.011	0.0093	0.0076	0.014	ø31×28
		Sb	Nb	Pb	Bi	As	Alt	W	B	Co					
NCS HS 11784	High phosphorus Cast Iron	0.0007	0.0012*	0.0002	0.0083	0.0041	0.0012*								
NCS HS 11785	High phosphorus Cast Iron	0.0005	(0.0009)	0.0002	0.013	0.0049	0.0030*								
NCS HS 11786	High phosphorus Cast Iron	0.0008	0.012	0.0003	0.015	0.0075	0.0094*								
NCS HS 11787	High Nickel pig Iron		0.0006*		0.042*		0.085*	0.0002*	0.0007	(0.0054)					
NCS HS 11788	High Nickel pig Iron		0.0006*		0.031*		(0.0023)	0.0002*	0.0008	(0.0063)					
NCS HS 11789	High Nickel pig Iron		0.0005*	0.015	0.067		0.061	0.0002*	0.0008	(0.0075)					
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Als	Alt	Ti	Nb	V	
NCS HS 11790	Silicon Steel	0.338	0.841	0.386	0.081	0.0066	0.73	1.52	0.027	0.536	0.538	0.234	0.278	0.035	ø37×40
NCS HS 11791	Silicon Steel	0.095	3.08	1.9	0.0063	0.023	0.032	0.022	0.066	0.34	0.35	0.012	0.0037	(0.0006)	ø37×40
NCS HS 11792	Pipe line steel	0.045	0.183	1.96	0.0075	0.0011	0.363	0.423	0.224	0.043	0.044	0.016	0.097	0.011	ø37×40
NCS HS 11793	Low alloy steel	0.037	0.257	1.59	0.126	0.015	0.452	0.08	0.15			0.239		0.064	ø37×40
		Mo	As	Sb	Sn	Zr	Ca	Bt							
NCS HS 11790	Silicon Steel	0.809	0.032	0.0011	0.00073	0.013									
NCS HS 11791	Silicon Steel	0.038	0.062	0.0018	0.023	0.023									
NCS HS 11792	Pipe line steel	0.324	0.0015				0.002	(0.0003)							
NCS HS 11793	Low alloy steel			0.015	0.042										
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	V	Ti	Mo					
NCS HS 13750	Low Alloy Steel	0.131	0.175	0.523	0.0126	0.0257	0.970			0.172					ø38×38
NCS HS 13752	Low Alloy Steel	0.517	0.204	0.986	0.0261	0.0108	0.685	0.094		0.258					ø38×38
NCS HS 13753	Low Alloy Steel	0.592	0.464	0.481	0.040	0.0397	0.752	0.122	0.0084	0.302					ø38×38
NCS HS 13755	Low Alloy Steel	0.420	0.301	0.924	0.024	0.020	0.960			0.187					ø38×38
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ti	Mo						
NCS HS 13758	Low Alloy Steel	0.165	0.502	1.451	0.0176	0.0221	0.34	0.173	0.143						ø38×35
NCS HS 13759	Low Alloy Steel	0.199	0.410	1.302	0.0171	0.022	0.384		0.161						ø38×35
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Al <sub>c</sub>	Cu	Al <sub>t</sub>	As	Ti	Mo		
NCS HS 18741	35CrMo	0.355	0.273	0.57	0.01	0.033	0.93	0.029	0.075	0.035	0.057	0.011	0.154		ø37×30
NCS HS 18742	16Mn	0.152	0.305	1.26	0.012	0.023	0.121		0.077		0.034	0.018			ø37×30
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Fe	Mo	V	Cu	W	Co	Nb	
NCS HS 11795	Nickel-based superalloy	0.029	0.038	0.012	0.002	0.001	18.89	18.75	3.1	0.047	-0.002	0.01	0.045	5.03	D38×35
NCS HS 11796	Nickel-based superalloy	0.044	0.031	0.0013	0.0008	(0.0008)	20.45	0.11		0.0069	0.0027		0.0014	1.52	D38×35
NCS HS 11797	Ferro-Nickel-based superalloy	0.043	0.026	0.051	0.0062	0.0033	11.27			0.0045	0.0042	0.0013	0.0021	0.0016	D38×35
		Als	Alt	Sn	Ti	B	Zr	Ni	As						
NCS HS 11795	Nickel-based superalloy	0.55	0.56	(0.0001)	1.02	0.0045									
NCS HS 11796	Nickel-based superalloy	0.98	1.01		2.86	0.0058	0.031								
NCS HS 11797	Ferro-Nickel-based superalloy	0.51	0.52	(0.0003)	2.91	0.012		23.04	0.0015						
Number	Name	Chemical Composition(%)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Alt	Als		
NCS HS 11766c	Alloy Structure Steel	0.213	0.235	0.932	0.0079	0.0025	1.15	0.014	0.011	0.0045	0.07				38×40
NCS HS 11766d	Alloy Structure Steel	0.211	0.232	0.929	0.0083	0.0029	1.14	0.013	0.01	0.0045	0.069	0.017	0.016		37×40

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Al	
NCS HS 11798	Spheroidal Graphite Cast Iron	3.78	2.73	0.606	0.053	0.02	0.7	0.856	0.526	0.018	0.117	0.359	0.042	31×30
NCS HS 11799a	Spheroidal Graphite Cast Iron	3.95	2.3	0.511	0.055	0.014	0.251	0.141	0.487	0.312	0.117	0.474	0.014	31×30
		Sb	Sn	Mg	La	Ce								
NCS HS 11798	Spheroidal Graphite Cast Iron	0.025	0.032	(0.034)	0.0042	0.0097								
NCS HS 11799a	Spheroidal Graphite Cast Iron		0.055	0.032	0.0064	0.012								
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Ni	Cr	W	Cu	Mo	V	N	
NCS HS18743	M2Al(W <sub>6</sub> Mo <sub>5</sub> Cr <sub>4</sub> V <sub>2</sub> Al)	1.05	0.44	0.3	0.023	0.0014	0.18	4.31	6.18	0.17	5.1	1.87		D35×35
NCS HS18744	4Cr <sub>4</sub> Mn <sub>18</sub>	0.42	0.48	17.1	0.016	0.042	0.06	4.03		0.1				D35×35
NCS HS18745	2Cr <sub>13</sub>	0.189	0.452	0.348	0.021	0.0034	0.132	12.58		0.079				D35×35
NCS HS18746	214N	0.533	0.222	9.34	0.025	0.0059	3.92	21.14		0.159	0.057	0.066	0.42	D35×35
NCS HS18747	318	0.254	1.31	0.547	0.023	0.0027	6.6	16.95		0.095	2.13	0.077	0.144	D35×35
NCS HS18748	0Cr <sub>17</sub>	0.027	0.617	0.408	0.031	0.0056	0.415	16.51		0.072				D35×35
NCS HS18749	4Cr <sub>9</sub> Si <sub>2</sub>	0.466	2.08	0.612	0.036	0.026	0.543	8.64		0.112	0.055	0.033		D35×35
NCS HS18750	4Cr <sub>10</sub> Si <sub>2</sub> Mo	0.355	2.56	0.425	0.035	0.023	0.346	10.53		0.128	0.798	0.051		D35×35
NCS HS18751	3Cr <sub>2</sub> W <sub>8</sub> V	0.4	0.25	0.25	0.017	0.016	0.46	2.72	8.14	0.05				D35×35
NCS HS18752	H <sub>13</sub> (4Cr <sub>5</sub> MoSiV <sub>1</sub> )	0.34	1.17	0.4	0.017	0.01	0.15	5.3		0.08	1.18	1.04		D35×35
		Co	As	Al										
NCS HS18743	M2Al(W <sub>6</sub> Mo <sub>5</sub> Cr <sub>4</sub> V <sub>2</sub> Al)	0.28		0.96										
NCS HS18744	4Cr <sub>4</sub> Mn <sub>18</sub>		0.014											
NCS HS18745	2Cr <sub>13</sub>		0.014											
NCS HS18746	214N	0.08												
NCS HS18747	318	0.044												
NCS HS18748	0Cr <sub>17</sub>		0.008											
NCS HS18749	4Cr <sub>9</sub> Si <sub>2</sub>		0.017											
NCS HS18750	4Cr <sub>10</sub> Si <sub>2</sub> Mo		0.017											
NCS HS18751	3Cr <sub>2</sub> W <sub>8</sub> V													
NCS HS18752	H <sub>13</sub> (4Cr <sub>5</sub> MoSiV <sub>1</sub> )		0.029	0.06										
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Al <sub>t</sub>	Al <sub>s</sub>	N	V	Ti	Mo	
NCS HS 20741	1Cr <sub>13</sub> Mo	0.125	0.0045	0.957	0.017	0.0045	12.91						0.41	ø35×40
NCS HS 20743	0Cr <sub>11</sub> Ti	0.015	0.97	0.949	0.038	0.0055	11.88	0.022	0.021	0.0155		0.411		ø35×40
NCS HS 20745	10PCuRE	0.068	0.33	0.813	0.1	0.024					0.022			ø35×40
NCS HS 20747	09MnNb	0.083	0.472	0.967	0.02	0.015								ø35×40
		Cu	Ce	Nb	La									
NCS HS 20745	10PCuRE	0.297	0.014		0.0076									
NCS HS 20747	09MnNb			0.052										
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Cu	Pb	Zn	P	Fe	Sn	Sb	Bi	Mn	Ni	Si		
NCS HS 28749	Lead Brass	57.09	1.74	41.11	<0.0015	0.017	0.017	<0.0015	<0.0010	0.0015	0.013	0.0012	ø38×30	
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Ti	Nb	Co	
NCS HS41767	Stainless Steel	0.031	0.73	1.69	0.026	0.011	16.77	6.62	0.316	0.319	0.002	0.003	0.031	Φ38×38
		V	Al	B	Pb	Sn	As	Ca	N					
NCS HS41767	Stainless Steel	0.00326	0.0029	0.0021	0.0001	0.002	0.0071	0.0005	0.049					

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)											Unit Size (mm)		
		C	S	Si	Mn	P	Cr	Ni	Mo	Cu	V	Ti			
NCS HS 37701-1	High Chromium Cast Iron	3.43	0.010	0.055	1.59	0.161	1.35	1.55	3.11	0.193	1.01	0.008	ø30×25		
NCS HS 37701-2	High Chromium Cast Iron	3.00	0.016	0.56	1.42	0.133	7.23	1.43	2.48	0.324	0.88	0.015	ø30×25		
NCS HS 37701-3	High Chromium Cast Iron	2.73	0.036	0.99	1.09	0.105	12.97	1.20	2.08	0.451	0.66	0.045	ø30×25		
NCS HS 37701-4	High Chromium Cast Iron	2.31	0.046	1.40	0.725	0.071	17.60	0.914	1.44	0.739	0.46	0.084	ø30×25		
NCS HS 37701-5	High Chromium Cast Iron	1.83	0.091	1.80	0.466	0.043	23.40	0.517	0.739	0.904	0.26	0.068	ø30×25		
NCS HS 37701-6	High Chromium Cast Iron	1.45	0.123	2.38	0.254	0.024	28.96	0.216	0.213	1.15	0.13	0.084	ø30×25		
Number	Name	Chemical Composition(Percent)										Unit Size (mm)			
		C	Si	Mn	P	S	Cu	Alt	Als	N(ppm)					
NCS HS 18753	Low Carbon low sulfur Steel	0.01	1.35	0.269	0.024	0.0046	0.017	0.283	0.28	27.9*			D35x40		
NCS HS 18754	Low Carbon low sulfur Steel	0.0037	0.99	0.256	0.086	0.0054	0.015	0.248	0.244	27.2*			D35x40		
NCS HS 18755	Low Carbon low sulfur Steel	0.002	0.88	0.297	0.085	0.0055	0.015	0.259	0.258	16.3*			D35x40		
NCS HS 18756	Low Carbon low sulfur Steel	0.0124	0.008	0.202	0.013	0.0091	0.017	0.024	0.022				D35x40		
NCS HS 18757	Low Carbon low sulfur Steel	0.0054	0.009	0.116	0.014	0.0095	0.023	0.043	0.04				D35x40		
Number	Name	Chemical Composition(Percent)												Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Al	Co	Ti	Mo	Cu		
NCS HS 31741	3Cr <sub>13</sub>	0.298	0.277	0.330	0.026	0.019	12.75	0.271		0.035		0.067	0.109	ø38×30	
NCS HS 31742	1Cr <sub>18</sub> Ni <sub>9</sub> Ti	0.096	0.566	1.27	0.030	0.005	17.25	8.22	0.098	0.112	0.555	0.132	0.307	ø38×30	
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Nb	Cu	As	Sn		
NCS HS 41743	Stainless steel	0.047	0.542	0.691	0.035	0.0044	15.85	3.53	0.195	0.202	3.37	0.0097	0.013	ø38×38	
NCS HS 41744	Stainless steel	0.137	0.297	7.98	0.045	0.0091	16.01	4.12	0.052		0.123	0.0043	0.0046	ø38×38	
NCS HS 41743	Stainless steel		V	Co	W	N	Co	W	N						
NCS HS 41743	Stainless steel	0.067	0.063	0.058	0.014	0.063	0.058	0.014							
NCS HS 41744	Stainless steel	0.049	0.078	0.0055	0.049	0.078	0.0055	0.049							
Number	Name	Chemical Composition(Percent)								Unit Size (mm)					
		C	Si	Mn	P	S	Cr	Ni							
NCSHS93702-1	Alloy steel	0.053	1.37	5.02	0.055	0.0027	17.51	2.44					ø38×30		
NCSHS93702-2	Alloy steel	0.18	1.04	6.60	0.038	0.010	15.26	3.61					ø38×30		
NCSHS93702-3	Alloy steel	0.28	0.94	8.37	0.024	0.016	12.67	4.56					ø38×30		
NCSHS93702-4	Alloy steel	0.35	0.74	11.00	0.018	0.025	10.72	5.67					ø38×30		
NCSHS93702-5	Alloy steel	0.42	0.40	12.93	0.011	0.033	8.22	6.68					ø38×30		
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Alt		
NCS HS 28741	Stainless Steel	0.039	0.425	1.07	0.037	0.016	18.31	8.19	0.399	0.027	0.106	0.002*		ø38×35	
NCS HS 28742	Stainless Steel	0.021	0.414	0.94	0.034	0.0028	18.2	8.11	0.043	0.025	0.089	0.006		ø38×35	
NCS HS 28743	Stainless Steel	0.11	0.78	0.841	0.024	0.0082	23.71	18.02	0.089	0.115	0.077	0.003*	0.0056	ø38×35	
NCS HS 28745	Stainless Steel	0.018	0.317	1.17	0.042	0.0057	16.61	10.34	0.334	2.05	0.07	0.002*		ø38×35	
NCS HS 28746	Stainless Steel	0.021	0.51	1.87	0.031	0.0009	17.19	8.24	0.34	0.069	0.096	0.184	0.086	ø38×35	
NCS HS 28747	Stainless Steel	0.132	0.502	0.453	0.027	0.0068	16.24	1.79	0.126	0.153	0.075	0.002*		ø38×35	
NCS HS 28748	Stainless Steel	0.045	0.644	0.742	0.028	0.013	15.88	3.85	3.23	0.259	0.076	0.002*		ø38×35	
NCS HS 28741	Stainless Steel		Co	Nb	Sn	Pb	N	As							
NCS HS 28741	Stainless Steel	0.208			0.0051	0.0001	0.069	0.0035							
NCS HS 28742	Stainless Steel	0.216			0.0001*	0.0001	0.059	0.0025							
NCS HS 28743	Stainless Steel	0.102	0.016		0.0025	0.0004	0.057	0.0042							
NCS HS 28745	Stainless Steel	0.185			0.0073	0.0001	0.07	0.0055							
NCS HS 28746	Stainless Steel	0.191			0.0065	0.0002	0.011	0.0032							
NCS HS 28747	Stainless Steel	0.051			0.0057	0.0001	0.03	0.0063							
NCS HS 28748	Stainless Steel	0.119	0.23		0.0063	0.0001	0.03	0.0047							

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	S	Mn	Si	P	Ni	Cr	Fe	Mo	Ti	Al	Cu	V	
NCS HS 41745	Nickel-based superalloy	0.043	0.0006	0.124	0.071	0.0023	63.72	20.69	3.50	8.37	0.011	0.016			ø40×30
NCS HS 41747	Corrosion-resisting alloy	0.071	0.0006	0.807	0.36	0.015	32.27	20.72		0.297	0.49	0.299	0.038		ø38×30
NCS HS 41748	Stainless Steel	0.194	0.011	0.62	0.54	0.016	0.077	12.70		0.010			0.008	0.048	ø38×38
NCS HS 41749	Stainless Steel	0.21	0.012	0.39	0.56	0.023	1.52	12.27					1.15	0.074	ø38×38
NCS HS 41750	Stainless Steel	0.075	0.012	1.43	0.33	0.031	6.35	16.31		0.107		0.009	0.276	0.064	ø38×38
NCS HS 41751a	Stainless Steel	0.075	0.16	1.7	0.71	0.035	8.07	17.41		0.33			0.26	0.068	ø38×38
NCS HS 41752	Stainless Steel	0.97	0.0016	0.46	0.48	0.023	0.192	17.61		0.057			0.082	0.088	ø38×38
NCS HS 41753a	Stainless Steel	0.012	0.013	0.973	0.48	0.021	24.28	19.16			0.004		1.26	0.075	ø38×38
		Ta**	Co	Nb	Co*	Mo	N	Ti*	Al*	W					
NCS HS 41745	Nickel-based superalloy	0.001		3.19	0.011										
NCS HS 41747	Corrosion-resisting alloy		0.050												
NCS HS 41749	Stainless Steel					0.158									
NCS HS 41750	Stainless Steel						0.058	0.001							
NCS HS 41751a	Stainless Steel		0.13				0.077								
NCS HS 41752	Stainless Steel								0.032						
NCS HS 41753a	Stainless Steel		0.18	0.812		4.25	0.041	0.004		0.058					
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
C	S	Mn	Si	P	Cr	Ni	Cu	Mo	Al	V	Ti	Mo			
NCS HS 41754	Alloy Structure Steel	0.197	0.0055	1.01	0.28	0.008	1.33	0.060	0.010	0.26	0.017	0.005	0.003		ø38×32
NCS HS 41755	Alloy Structure Steel	0.23	0.004	0.27	0.044	0.0046	1.64	3.40					0.37		ø38×38
NCS HS 41756	Alloy Structure Steel	0.205	0.002	0.60	0.25	0.011	0.93	0.012	0.008	0.17		0.004	0.004		ø38×32
NCS HS 41757	Easy cutting Steel	0.079	0.28	1.01	0.018	0.055	0.047	0.058	0.17	0.012					ø38×32
NCS HS 41758	Easy cutting Steel	0.079	0.30	0.986	0.015	0.056	0.023	0.051	0.15	0.049					ø38×32
NCS HS 41759	Alloy Structure Steel	0.21	0.008	0.57	0.21	0.012	0.78	0.015	0.025		0.017	0.003	0.0034		ø38×32
NCS HS 41760	Stainless steel	0.153	0.0071	0.56	0.26	0.035	16.30	1.92	0.078	0.055	0.005	0.081	0.002		ø38×38
NCS HS 41761	Alloy Structure Steel	0.121	0.0026	0.463	0.335	0.014	8.71	0.064	0.055	0.93	0.005	0.21			ø38×38
		V	Sn	Pb	As	Nb	N								
NCS HS 41755	Alloy Structure Steel	0.080													
NCS HS 41757	Easy cutting Steel		0.019	0.26	0.025										
NCS HS 41758	Easy cutting Steel		0.020	0.018	0.026										
NCS HS 41760	Stainless steel					0.012									
NCS HS 41761	Alloy Structure Steel					0.072	0.040								
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Ti	W	B			
NCS HS 92703-1	High Chromium Cast Iron	3.31	0.098	1.54	0.369	0.0047	1.17	2.57	1.47	0.952	0.449		0.015	0.177	ø30×30
NCS HS 92703-2	High Chromium Cast Iron	2.96	0.491	1.24	0.211	0.0077	9.75	1.99	2.17	0.669	1.57	0.300	1.99	0.142	ø30×30
NCS HS 92703-3	High Chromium Cast Iron	2.40	0.821	1.06	0.115	0.015	13.30	1.55	0.869	0.482	0.953	0.171	1.57	0.102	ø30×30
NCS HS 92703-4	High Chromium Cast Iron	2.00	1.16	0.803	0.090	0.025	18.28	1.07	0.598	0.380	0.738	0.087	1.05	0.086	ø30×30
NCS HS 92703-5	High Chromium Cast Iron	1.48	1.37	0.579	0.041	0.058	22.55	0.708	0.359	0.314	0.583	0.056	0.694	0.076	ø30×30
NCS HS 92703-6	High Chromium Cast Iron	1.16	1.44	0.302	0.033	0.086	25.76	0.289	0.150	0.146	0.845	0.019	0.370	0.055	ø30×30
NCS HS 92703-7	High Chromium Cast Iron	3.13	2.48	0.201	0.024	0.116	31.26	0.129	0.086	0.087	0.154	0.033	0.175	0.015	ø30×30
		Nb													
NCS HS 92703-1	High Chromium Cast Iron	0.018													
NCS HS 92703-2	High Chromium Cast Iron	0.182													
NCS HS 92703-3	High Chromium Cast Iron	0.149													
NCS HS 92703-4	High Chromium Cast Iron	0.071													
NCS HS 92703-5	High Chromium Cast Iron	0.022													
NCS HS 92703-6	High Chromium Cast Iron	0.014													
NCS HS 92703-7	High Chromium Cast Iron	0.010													

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)										Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Mg	Ti	Ce		
NCS HS 92746	Alloy Cast Iron	3.36	2.44	0.231	0.040	0.0060	0.16	2.24	0.033	0.073	0.0060		ø30×30
Number	Name	Chemical Composition(Percent)										Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V		Nb
NCS HS 93743	Stainless Steel	0.044	0.723	1.2	0.035	0.0013	18.45	9.21	0.148	0.405	0.068	0.504	D37X35
NCS HS 93744	Stainless Steel	0.014	0.185	0.85	0.021	0.0031	19.62	23.45	1.23	4.4	0.054	0.086	D37X35
NCS HS 93745	Stainless Steel	0.206	0.3	0.474	0.014	0.0036	10.5	0.639	0.072	0.748	0.196	0.353	D37X35
Number	Name	Chemical Composition(Percent)											
		Co	Ti	Alt	W	Sn	N						
NCS HS 93743	Stainless Steel	0.118											
NCS HS 93744	Stainless Steel	0.169	0.01	0.161	0.086								
NCS HS 93745	Stainless Steel	0.032				0.005	0.071						
Number	Name	Chemical Composition(Percent)										Unit Size (mm)	
		C	Si	Mn	P	S	Ni	Cr	Cu	Mo	V		Ti
NCS HS28705a-1	Pig Iron	4.3	0.228	1.48	0.014	0.153	0.012	0.022	0.0079	0.0035	0.558	0.0093	ø30×30
NCS HS28705a-2	Pig Iron	3.73	0.61	1.34	0.056	0.147	0.06	0.077	0.071	0.071	0.489	0.032	ø30×30
NCS HS28705a-3	Pig Iron	3.5	1.32	1.12	0.188	0.114	0.18	0.142	0.136	0.147	0.356	0.225	ø30×30
NCS HS28705a-4	Pig Iron	3.27	1.96	0.85	0.147	0.09	0.371	0.233	0.233	0.261	0.257	0.248	ø30×30
NCS HS28705a-5	Pig Iron	2.91	2.54	0.65	0.104	0.053	0.54	0.382	0.326	0.347	0.173	0.287	ø30×30
NCS HS28705a-6	Pig Iron	2.44	3.31	0.403	0.298	0.03	0.792	0.46	0.404	0.427	0.067	0.342	ø30×30
NCS HS28705a-7	Pig Iron	1.72	3.94	0.172	0.452	0.0091	0.99	0.525	0.51	0.524	0.016	0.586	ø30×30
Number	Name	Chemical Composition(Percent)										Unit Size (mm)	
		Alt	Als	Sn	Co	Pb	B	Sb	Zn	As			
NCS HS28705a-1	Pig Iron	0.031	0.028	0.0006	0.082	0.0015	0.0008	0.0006	0.0006	0.0033			
NCS HS28705a-2	Pig Iron	0.0047	0.004	0.43	0.108	0.0002	0.0031	0.08	0.0009	0.0046			
NCS HS28705a-3	Pig Iron	0.076	0.074	0.033	0.056	0.0046	0.019	0.038	0.001	0.061			
NCS HS28705a-4	Pig Iron	0.052	0.05	0.065	0.038	0.017	0.075	0.052	0.0016	0.082			
NCS HS28705a-5	Pig Iron	0.125	0.12	0.108	0.02	0.0042	0.088	0.077	0.002	0.046			
NCS HS28705a-6	Pig Iron	0.065	0.061	0.187	0.0061	0.016	0.133	0.13	0.0025	0.015			
NCS HS28705a-7	Pig Iron	0.19	0.182	0.294	0.0048	0.022	0.225	0.228	0.0034	0.0061			
Number	Name	Chemical Composition(Percent)										Unit Size (mm)	
		C	Si	Mn	S	Cu	Fe	Cr	Mo	Co	V		W
NCS HS35740	Corrosion-resistant alloy	0.026	0.493	1.27	0.0018*	0.024	4.03	15.62	19.72	2.49	0.149	3.59	ø35 x 20
NCS HS35741	Corrosion-resistant alloy	0.046	1.22	0.909	0.016		2.97	16.46	18.44	1.7	0.282	4.02	ø35 x 20
NCS HS35742	Corrosion-resistant alloy	0.2	1.4	0.1	0.035	0.45	8	20	15.9	0.055	0.62	6	ø35 x 20
NCS HS35743	Corrosion-resistant alloy	0.084	1.01	0.597	0.031	0.019	5.94	0.375	27.94	1.7	0.212	0.096	ø35 x 20
Number	Name	Chemical Composition(Percent)											
		Ti	Al	N	Ni*	P	Nb	Zr*	Ni				
NCS HS35740	Corrosion-resistant alloy	0.267	0.008	0.004									
NCS HS35741	Corrosion-resistant alloy	0.181	0.005	0.0091	53.8	0.05							
NCS HS35742	Corrosion-resistant alloy	0.2	0.7	0.008									
NCS HS35743	Corrosion-resistant alloy	0.034	0.016	0.0013		0.049	0.056	0.016	61.8				

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	Ti	W	
NCS HS37702-1	Medium-Low Alloy Steel	0.957	0.146	2.07	0.053	0.009	0.127	0.124	0.498	0.134	0.061	0.013	0.055	ø36×36
NCS HS37702-2	Medium-Low Alloy Steel	0.747	0.255	1.62	0.043	0.023	0.638	0.49	0.421	0.215	0.161	0.007	0.114	ø36×36
NCS HS37702-3	Medium-Low Alloy Steel	0.566	0.475	1.26	0.028	0.039	1.23	1.07	0.312	0.299	0.264	0.209	0.227	ø36×36
NCS HS37702-4	Medium-Low Alloy Steel	0.441	0.707	0.854	0.036	0.064	1.86	1.61	0.214	0.398	0.365	0.298	0.431	ø36×36
NCS HS37702-5	Medium-Low Alloy Steel	0.197	0.777	0.432	0.02	0.111	2.54	2.52	0.117	0.452	0.453	0.065	0.397	ø36×36
NCS HS37702-6	Medium-Low Alloy Steel	0.03	1.11	0.143	0.012		2.98	2.17	0.063	0.526	0.563	0.024	0.507	ø36×36
			Nb	N	As	Al								
NCS HS37702-1	Medium-Low Alloy Steel	0.023	0.007	0.004	0.301									
NCS HS37702-2	Medium-Low Alloy Steel	0.064	0.012	0.008	0.297									
NCS HS37702-3	Medium-Low Alloy Steel	0.116	0.014	0.006	0.124									
NCS HS37702-4	Medium-Low Alloy Steel	0.158	0.015	0.006	0.19									
NCS HS37702-5	Medium-Low Alloy Steel	0.225	0.053	0.003	0.184									
NCS HS37702-6	Medium-Low Alloy Steel	0.237	0.052	0.002	0.043									
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	V	Sn	
NCS HS93750	Heat - resisting alloy	0.365	2.34	0.94	0.025	0.001	24.56	19.19	0.038	0.022	0.016	0.082	0.016	ø38×40
			As*	Al*	B*	Nb	Sb*	Pb*	Co	W	N			
NCS HS93750	Heat - resisting alloy	0.002	0.005	0.0005	1.37	0.009	0.002	0.029	0.013	0.064				
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		TC	TS	CaO	MgO	SiO <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	TiO <sub>2</sub>	MnO	Al <sub>2</sub> O <sub>3</sub>	TFe	Zn	K <sub>2</sub> O	
NCS HS 28710-1	Iron-bearing dust and sludge	0.28	0.48	2.08	0.9	2.44	0.5	0.054	1.99	0.37	45.42	12.17	2.47	30g
NCS HS 28710-2	Iron-bearing dust and sludge	8.62	0.63	53.54	3.79	5.18	0.052	0.16	0.075	1.41	5.83	0.042	0.57	30g
NCS HS 28710-3	Iron-bearing dust and sludge	0.94	0.5	10.27	1.62	1.5	0.24	0.049	0.76	0.26	56.59	1.03	1.04	30g
NCS HS 28710-4	Iron-bearing dust and sludge	5.15	1.82	24.03	11.84	7.54	0.082	0.16	7.18	3.43	13.61	0.3	5.45	30g
NCS HS 28710-5	Iron-bearing dust and sludge	4.88	0.36	1.23	0.2	2.24	0.23	0.072	0.21	0.76	62.68	0.2	0.43	30g
NCS HS 28710-6	Iron-bearing dust and sludge	7.5	1.11	20.01	3.3	3.99	0.25	0.21	1.28	1.85	28.25	2.15	2.15	30g
NCS HS 28710-7	Iron-bearing dust and sludge	2.2	0.82	29.61	36.46	4.77	0.037	0.13	3.24	5.29	2.21	0.15	0.55	30g
NCS HS 28710-8	Iron-bearing dust and sludge	18.16	0.34	8.26	1.35	8.6	0.2	0.37	0.22	3.8	39.68	0.037	0.23	30g
			Na <sub>2</sub> O	V	Cd	F	Cr	Cl	As	Sb	Pb	LOI		
NCS HS 28710-1	Iron-bearing dust and sludge	2.56	0.014	0.0098	0.12	0.16	4.55	0.0062	0.01	0.6	8.99			
NCS HS 28710-2	Iron-bearing dust and sludge	0.11	0.0046	(0.00004)	0.22	0.0031	0.16	0.001	(0.0001)	0.0019	25.6			
NCS HS 28710-3	Iron-bearing dust and sludge	1.34	0.014	0.0009	0.057	0.016	0.82	0.0033	0.0012	0.055	1.23			
NCS HS 28710-4	Iron-bearing dust and sludge	2.19	0.0062	0.0003	1.75	0.041	1.35	0.0031	0.002	0.026	15.46			
NCS HS 28710-5	Iron-bearing dust and sludge	0.18	0.014	(0.00006)	0.032	0.014	0.066	0.0065	0.0007	0.0026	4.4			
NCS HS 28710-6	Iron-bearing dust and sludge	0.67	0.019	0.0032	0.45	0.023	1.46	0.0044	0.0021	0.11	21.98			
NCS HS 28710-7	Iron-bearing dust and sludge	1.2	0.0071	(0.00009)	1.19	0.68	0.57	0.002	0.0017	0.014	11.04			
NCS HS 28710-8	Iron-bearing dust and sludge	0.21	0.014	(0.00009)	0.026	0.0092	0.047	0.0036	0.0003	0.0053	20.01			
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	Ti	Al	
NCS HS 44731	Cast Iron	2.92	3.01	0.296	0.023	0.006	1.59	1.89	0.0029	0.089	0.299	0.034	0.026	32×28
			Sn	Mg	As	Co	Sb	B	W	Nb	La	Ce	Zr*	Pb*
NCS HS 44731	Cast Iron	0.209	0.026	0.03	0.584	0.072	0.039	0.048	0.156	0.016	0.073	0.0018	0.0026	
Number	Name	Chemical Composition (Weight Percent) %												Unit Size (mm)
		C	Si	Mn	P	S	Ti	Nb	N	B	Al <sub>t</sub>	Al <sub>s</sub>		
NCS HS 92747	Low Alloy Steel	0.0022	0.12	0.27	0.029	0.0071	0.022	0.031	(0.0026)	(0.0002)	0.0063	(0.0053)		38×32

## Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)										Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	
NCS HS 92748	Cast Iron	1.85	0.45	1.48	0.031	0.007	0.12	1.31	0.099	0.14	1.79	28×28
NCS HS 92749	Cast Iron	2.11	0.17	0.82	0.319	0.022	4.97	3.22	3.5	0.6	1.86	35×28
NCS HS 92750	High Chromium Cast Iron with Nitrogen	1.81	2	1.16	0.201	0.057	15.42	1.91	2.2	0.33	1.1	35×30
NCS HS 92751	High Chromium Cast Iron with Nitrogen	3.03	1.65	0.16	0.041	0.088	30.35	0.37	0.22	0.077	0.35	35×29
NCS HS 92752	Cast Iron	3.08	0.56	0.62	0.045	0.036	15.32	1.21	2.7	0.28	0.77	35×30
NCS HS 92753	Medium-Low Alloy Steel	0.08	0.3	2.03	0.01	0.06	0.04	0.03	0.98	0.4	1.03	30×25
		Mg	W	Ti	Sn	B	N	Al	Nb	As	Sn	Co
NCS HS 92748	Cast Iron	0.02	0.83	0.1	0.06	0.05						
NCS HS 92749	Cast Iron						0.021					
NCS HS 92750	High Chromium Cast Iron with Nitrogen						0.075					
NCS HS 92751	High Chromium Cast Iron with Nitrogen						0.108					
NCS HS 92752	Cast Iron			0.02								
NCS HS 92753	Medium-Low Alloy Steel		1.62	0.001		0.36		0.203	0.005	0.01	0.004	0.38
		Pb	Sb	Zr	Bi	Ca	Zn					
NCS HS 92753	Medium-Low Alloy Steel	0.003	0.07	0.047	0.009	0.0001	0.001					
Number	Name	Chemical Composition(%)										Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Ni	V	Pb	
NCS HS93707-1	Medium-Low Alloy Steel	0.228	0.48	0.817	0.01	0.034	0.515	0.142	3.47	0.295	0.008	36×30
NCS HS93707-2	Medium-Low Alloy Steel	0.495	0.12	0.427	0.025	0.013	2.41	1.11	1.01	0.377	0.0088	36×30
NCS HS93707-3	Medium-Low Alloy Steel	0.339	0.375	0.319	0.02	0.0051	1.03	0.291	3.98	0.053	0.012	36×30
NCS HS93707-4	Medium-Low Alloy Steel	0.373	0.173	0.595	0.032	0.028	1.45	0.49	2.8	0.166	0.0046	36×30
NCS HS93707-5	Medium-Low Alloy Steel	0.145	0.302	0.176	0.012	0.02	2.2	1.49	1.92	0.083	0.0012	36×30
NCS HS93707-6	Medium-Low Alloy Steel	0.729	0.177	0.404	0.03	0.02	2.67	0.614	0.492	0.115	0.0097	36×30
NCS HS93707-7	Medium-Low Alloy Steel	0.305	0.272	0.608	0.013	0.06	1.83	1.79	0.196	0.232	0.011	36×30
		Cu	Sn	As	Sb	Bi						
NCS HS93707-1	Medium-Low Alloy Steel	0.192	0.0011	0.054	0.015	0.006						
NCS HS93707-2	Medium-Low Alloy Steel	0.292	0.015	0.021	0.017	0.0061						
NCS HS93707-3	Medium-Low Alloy Steel	0.042	0.019	0.0072	0.012	0.001						
NCS HS93707-4	Medium-Low Alloy Steel	0.145	0.0065	0.013	0.013	0.006						
NCS HS93707-5	Medium-Low Alloy Steel	0.088	0.022	0.0032	0.0033	0.0041						
NCS HS93707-6	Medium-Low Alloy Steel	0.038	0.042	0.026	0.012	0.009						
NCS HS93707-7	Medium-Low Alloy Steel	0.128	0.013	0.07	0.022	0.019						
Number	Name	Chemical Composition(%)										Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	
NCS HS 93750a	Heat - resisting alloy	0.399	2.06	0.94	0.022	0.008	23.31	22.72	0.084	0.053	0.039	36×36
		V	Sn	Nb	Pb	Co	W	N				
NCS HS 93750a	Heat - resisting alloy	0.091	0.004	1.81	0.004	0.075	0.011	0.054				
Number	Name	Chemical Composition(%)										Unit Size (mm)
		Cu	Mg	Ti	B	La	Ce	Sn	As	Alt	W	
NCS HS92754	Cast Iron	0.155	0.018	0.098	0.023	0.0093	0.036	0.112	0.016	0.126	0.013	φ33×29-31
		Pb	Sb	Nb	Co	Zr	Zn	Ca	Bi			
NCS HS92754	Cast Iron	0.0015	0.162	0.017	0.059	0.001	0.016	0.0007	0.0003*			
Number	Name	Chemical Composition(%)										Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	
NCS HS93753	Cast Iron	3.31	3.21	7	0.042	0.011	0.12	0.024	0.0044	0.0091	0.021	φ35×20
		Ti	V	Mg								
NCS HS93753	Cast Iron	0.027	0.012	0.034								