

Product outline (applications and standards)

Common grade seamless pipes and tubes for the chemical industry

Classification	Grade	Component	Applicable standard			Characteristics ● Example of an application	Chemical composition (mass%)										Room-temperature tensile property		
			ASTM/ASME (example of a standard)	EN, etc.	JIS (example of a standard)		C	Si	Mn	P	S	Ni	Cr	Mo	N	Others	TS, min. MPa	YS, min. MPa	EL, min. %
Austenitic stainless steel	303	18Cr-8Ni-S	S30300	1.4305	SUS303	Free cutting steel	0.15max.	1.00max.	2.00max.	0.20max.	0.15min.	8.0~10.0	17.0~19.0	0.60max.	—	—	515	210	35
	304	18Cr-8Ni	S30400	1.4301	SUS304	Basic steel grade:	0.08max.	1.00max.	2.00max.	0.045max.	0.030max.	8.0~11.0	18.0~20.0	—	—	—	515	205	35
	304H	18Cr-8Ni-High C	S30409	1.4948	SUS304H	● General-purpose steel for numerous applications in many fields	0.04~0.10	1.00max.	2.00max.	0.045max.	0.030max.	8.0~11.0	18.0~20.0	—	—	—	515	205	35
	304L	18Cr-8Ni-Low C	S30403	1.4307	SUS304L		0.035max.	1.00max.	2.00max.	0.045max.	0.030max.	8.0~12.0	18.0~20.0	—	—	—	485	170	35
	304N	18Cr-8Ni-N	S30451 (ASTM A213 TP304N)	1.4315	(SUS304N1)	High strength	0.08max.	1.00max.	2.00max.	0.045max.	0.030max.	8.0~11.0	18.0~20.0	—	0.10~0.16	—	550	240	35
	304LN	18Cr-8Ni-Low C-N	S30453 (ASTM A213 TP304LN)	1.4311	(SUS304LN)	Intergranular corrosion resistance	0.035max.	1.00max.	2.00max.	0.045max.	0.030max.	8.0~11.0	18.0~20.0	—	0.10~0.16	—	515	205	35
	309H	22Cr-12Ni	S30909	1.4829	SUS309	Oxidation resistance: ● Chemical plant pipes and tubes	0.04~0.10	1.00max.	2.00max.	0.045max.	0.030max.	12.0~15.0	22.0~24.0	—	—	—	515	205	35
	309S	22Cr-12Ni	S30908	—	SUS309S	● Radiant tubes	0.08max.	1.00max.	2.00max.	0.045max.	0.030max.	12.0~15.0	22.0~24.0	—	—	—	515	205	35
	310H	25Cr-20Ni	S31009	1.4842	SUS310	● Thermocouple protection tubes	0.04~0.10	1.00max.	2.00max.	0.045max.	0.030max.	19.0~22.0	24.0~26.0	—	—	—	515	205	35
	310S	25Cr-20Ni	S31008	—	SUS310S		0.08max.	1.00max.	2.00max.	0.045max.	0.030max.	19.0~22.0	24.0~26.0	—	—	—	515	205	35
	312L	20Cr-18Ni-6Mo-0.2N	S31254	1.4547	SUS312L (JIS G3463)	Seawater resistance: ● Seawater desalination plant pipes	0.020max.	0.80max.	1.00max.	0.030max.	0.010max.	17.5~18.5	19.5~20.5	6.0~6.5	0.18~0.25	Cu:0.50~1.00	655*1	310	35
	316	18Cr-12Ni-2Mo	S31600	1.4401	SUS316	Corrosion resistance: ● LNG plant pipes	0.08max.	1.00max.	2.00max.	0.045max.	0.030max.	10.0~14.0	16.0~18.0	2.00~3.00	—	—	515	205	35
	316H	18Cr-12Ni-2Mo-High C	S31609	1.4918	SUS316H	● Boilers, nuclear power and chemical industry pipes and tubes	0.04~0.10	1.00max.	2.00max.	0.045max.	0.030max.	11.0~14.0	16.0~18.0	2.00~3.00	—	—	515	205	35
	316L	18Cr-12Ni-2Mo-Low C	S31603	1.4404	SUS316L		0.035max.	1.00max.	2.00max.	0.045max.	0.030max.	10.0~14.0	16.0~18.0	2.00~3.00	—	—	485	170	35
	316Ti	18Cr-12Ni-Mo-Ti	S31635 (ASTM A213 TP316Ti)	1.4571 1.4573	SUS316Ti (JIS G3463)	Intergranular corrosion resistance	0.08max.	0.75max.	2.00max.	0.045max.	0.030max.	10.0~14.0	16.0~18.0	2.00~3.00	0.10max.	Ti:5 (C%+N%) ~0.70	515	205	35
	317	18Cr-12Ni-3Mo	S31700	—	SUS317	Pitting corrosion resistance: ● Chemical tanker pipes	0.08max.	1.00max.	2.00max.	0.045max.	0.030max.	11.0~15.0	18.0~20.0	3.0~4.0	—	—	515	205	34
	317L	18Cr-12Ni-3Mo-Low C	S31703	1.4438	SUS317L		0.035max.	1.00max.	2.00max.	0.045max.	0.030max.	11.0~15.0	18.0~20.0	3.0~4.0	—	—	515	205	35
	321	18Cr-9Ni-Ti	S32100	1.4541	SUS321	Intergranular corrosion resistance: ● Chemical plant pipes	0.08max.	1.00max.	2.00max.	0.045max.	0.030max.	9.0~12.0	17.0~19.0	—	—	Ti:5 (C%+N%) ~0.70	515	205	35
	321H	18Cr-9Ni-Ti-High C	S32109	1.4940	SUS321H	High-temperature strength: ● Boiler heater tubes and reheater tubes	0.04~0.10	1.00max.	2.00max.	0.045max.	0.030max.	9.0~12.0	17.0~19.0	—	—	Ti:4 (C+N) ~0.70	515	205	35
	347	18Cr-9Ni-Nb	S34700	1.4550	SUS347	Intergranular corrosion resistance: ● Chemical plant pipes and tubes	0.08max.	1.00max.	2.00max.	0.045max.	0.030max.	9.0~13.0	17.0~20.0	—	—	Nb:10 x C%~1.10	515	205	35
347H	18Cr-9Ni-Nb-High C	S34709	1.4942	SUS347H	High-temperature strength: ● Boiler heater tubes and reheater tubes	0.04~0.10	1.00max.	2.00max.	0.045max.	0.030max.	9.0~13.0	17.0~19.0	—	—	Nb:8 x C%~1.10	515	205	35	
254SMO	20Cr-18Ni-6Mo-Cu-N	S31254 (ASTM A312)	1.4547	—	High pitting corrosion resistance: ● Seawater heat exchanger tubes	0.020max.	0.80max.	1.00max.	0.030max.	0.010max.	17.5~18.5	19.5~20.5	6.0~6.5	0.18~0.25	Cu:0.50~1.00	655*3	310	35	
310MoLN	25Cr-22Ni-2Mo-N	S31050 (ASTM A213)	1.4466	—	Intergranular corrosion resistance: ● Urea reactor tubes	0.025max.	0.40max.	2.00max.	0.020max.	0.030max.	21.0~23.0	24.0~26.0	2.00~3.00	0.10~0.16	—	540*2	255*2	25*2	
Duplex stainless steel	329J3L	22Cr-5Ni-3Mo-0.15N	S31803 (ASTM A789)	1.4462 NORSOK M-630/M-650	SUS329J3L		0.030max.	1.00max.	2.00max.	0.030max.	0.020max.	4.5~6.5	21.0~23.0	2.5~3.5	0.08~0.20	—	620	450	25
	329J4L	25Cr-7Ni-3Mo-0.2N	S31260 (ASTM A789)	—	SUS329J4L	High strength, high corrosion resistance: ● Various heat exchanger tubes	0.030max.	0.75max.	1.00max.	0.030max.	0.030max.	5.5~7.5	24.0~26.0	2.5~3.5	0.10~0.30	Cu:0.20~0.80 W:0.10~0.50	690	450	25
	S31500	18.5Cr-5Ni-2.7Mo	S31500 (ASTM A789)	—	—		0.030max.	1.40~2.00	1.20~2.00	0.030max.	0.030max.	4.3~5.2	18.0~19.0	2.50~3.00	0.05~0.1	—	630	440	30
	S32205	22.5Cr-6Ni-3Mo-0.2N	S32205 (ASTM A789)	1.4462 NORSOK M-630/M-650	—		0.030max.	1.00max.	2.00max.	0.030max.	0.020max.	4.5~6.5	22.0~23.0	3.0~3.5	0.14~0.20	—	655	485	25
	S32750	25Cr-7Ni-4Mo-0.3N	S32750 (ASTM A789)	1.4410 NORSOK M-630/M-650	—	High strength, high corrosion resistance: ● Seawater desalination plant pipes	0.030max.	0.80max.	1.20max.	0.035max.	0.020max.	6.0~8.0	24.0~26.0	3.0~5.0	0.24~0.32	Cu:0.50max. Cr%+3.3 x Mo%+ 16 x N% ≥ 41	800	550	15
Martensitic stainless steel	405	13Cr-Al	S40500 (ASTM A268 TP405)	1.4002	SUS405 (JIS G3463)	Low thermal expansion: ● Automotive exhaust system pipes	0.08max.	1.00max.	1.00max.	0.040max.	0.030max.	0.50max.	11.5~14.5	—	—	Al:0.10~0.30	415	205	20
	410	13Cr	S41000 (ASTM A268 TP410)	1.4006	SUS410 (JIS G3463)		0.15max.	1.00max.	1.00max.	0.040max.	0.030max.	—	11.5~13.5	—	—	—	415	205	20
Ferritic stainless steel	430	18Cr	S43000 (ASTM A268 TP430)	1.4016	SUS430 (JIS G3463)		0.12max.	1.00max.	1.00max.	0.040max.	0.030max.	—	16.0~18.0	—	—	—	415	240	20
	444	19Cr-2Mo-Ti/Nb	S44400 (ASTM A213 TP444)	1.4521	SUS444 (JIS G3463)	Chloride corrosion resistance and stress corrosion crack resistance: ● Water heater pipes	0.03max.	1.00max.	1.00max.	0.040max.	0.030max.	—	17.5~19.5	1.75~2.50	0.035max.	Ti+Nb:0.20+4 (C%+N%) ~0.80 Ni+Cu:1.00max.	415	275	20
	446	25Cr-N	S44600 (ASTM A268 TP446-1)	—	—		0.20max.	1.00max.	1.50max.	0.040max.	0.030max.	0.75max.	23.0~27.0	—	0.25max.	—	485	275	18
High Ni alloy	800	20Cr-30Ni-Ti	N08800 (ASTM B163)	1.4558	NCF800 (JIS G4904)	High corrosion resistance	0.10max.	1.0max.	1.5max.	0.045max.	0.015max.	30.0~35.0	19.0~23.0	—	—	Cu:0.75max. Al:0.15~0.60 Ti:0.15~0.60 Fe:39.5min.	517	207	30
	800H	20Cr-30Ni-Ti-High C	N08810 (ASTM B163)	1.4876	NCF800H (JIS G4904)	High strength, high corrosion resistance: ● Chemical plant heater tubes and reheater tubes	0.05~0.10	1.0max.	1.5max.	0.045max.	0.015max.	30.0~35.0	19.0~23.0	—	—	Cu:0.75max. Al:0.15~0.60 Ti:0.15~0.60 Fe:39.5min.	448	172	30
	904L	20Cr-25Ni-4.5Mo-Cu	N08904 (ASTM A312)	1.4539	SUS890L (JIS G3463)	High corrosion resistance: ● Various heat exchanger tubes	0.020max.	1.00max.	2.00max.	0.040max.	0.030max.	23.0~28.0	19.0~23.0	4.0~5.0	0.10max.	Cu:1.00~2.00	490	215	35
	28	27Cr-31Ni-3.5Mo-Cu	N08028 (ASTM B668)	1.4563	—		0.030max.	1.0max.	2.50max.	0.030max.	0.030max.	30.0~34.0	26.0~28.0	3.0~4.0	—	Cu:0.6~1.4	500	214	40
	20	20Cr-35Ni-2Mo-3Cu-Nb	N08020 (ASTM B729)	2.4660	—	High corrosion resistance	0.07max.	1.00max.	2.00max.	0.045max.	0.035max.	32.00~38.00	19.00~21.00	2.00~3.00	—	Cu:3.00~4.00 Nb+Ta:8 x C~1.00	550	240	30
825	20Cr-42Ni-3Mo-2Cu-Ti	N08825 (ASTM B163)	2.4858	NCF825 (JIS G4904)	High corrosion resistance and stress corrosion cracking resistance: ● Heat exchanger tubes for petroleum refining	0.05max.	0.5max.	1.00max.	—	0.03max.	38.0~46.0	19.5~23.5	2.5~3.5	—	Cu:1.5~3.0 Al:0.2max. Ti:0.6~1.2 Fe:22.0min.	586	241	30	
Ni-based alloy	600	15Cr-8Fe-Ni base	N06600 (ASTM B163)	2.4816	NCF600 (JIS G4904)	Oxidation resistance: ● Thermocouple protection tubes	0.15max.	0.5max.	1.0max.	0.030max.	0.015max.	72.0min.	14.0~17.0	—	—	Fe:6.00~10.0 Cu:0.50max.	552	241	30
	601	23Cr-1.4Al-Ni base	N06601 (ASTM B163)	2.4581	—	Oxidation resistance and carburization resistance	0.10max.	0.5max.	1.0max.	—	0.015max.	58.0~63.0	21.0~25.0	—	—	Al:1.0~1.7 Cu:1.0max.	552	207	30
	625	22Cr-9Mo-Ni base	N06625 (ASTM B444)	2.4856	NCF625 (JIS G4904)	High corrosion resistance and stress corrosion cracking resistance: ● Seawater heat exchanger tubes	0.10max.	0.50max.	0.50max.	0.015max.	0.015max.	58.0min.	20.0~23.0	8.0~10.0	—	Fe:5.0max. Co:1.0max. Al:0.40max. Ti:0.40max. Nb+Ta:3.15~4.15	690 Solution	276 Solution	30
	690	29Cr-9Fe-Ni base	N06690 (ASTM B163)	2.4642	NCF690 (JIS G4904)	High corrosion resistance	0.05max.	0.5max.	0.5max.	0.030max.	0.015max.	58.0min.	27.0~31.0	—	—	Fe:7.0~11.0 Cu:0.5max.	586	241	30
	C22	21Cr-13Mo-3W-Ni base	N06022 (ASTM B622)	2.4602	—		0.015max.	0.08max.	0.50max.	0.02max.	0.02max.	Remnant	20.0~22.5	12.5~14.5	—	Fe:2.0~6.0 Co:2.5max. W:2.5~3.5 V:0.35max.	690	310	45
	276	15.5Cr-16Mo-5Fe-Ni base	N10276 (ASTM B622)	2.4819	—	High acid resistance: ● Heat exchanger tubes for chemical plants	0.010max.	0.08max.	1.0max.	0.04max.	0.03max.	Remnant	14.5~16.5	15.0~17.0	—	Fe:4.0~7.0 Co:2.5max. W:3.0~4.5 V:0.35max.	690	283	40
	200	Ni (Annealed)	N02200 (ASTM B161)	2.4066	—	High corrosion resistance: ● Heat exchanger tube for caustic soda and hydrogen chloride plants	0.15max.	0.35max.	0.35max.	—	0.01max.	99.0min.	—	—	—	Fe:0.40max. Cu:0.25max.	380*4	105*4	35*4
201	Ni-Low C (Annealed)	N02201 (ASTM B161)	2.4068	—		0.02max.	0.35max.	0.35max.	—	0.01max.	99.0min.	—	—	—	Fe:0.40max. Cu:0.25max.	345*4	80*4	35*4	

UNS No.

*1 : t > 0.18in (5mm) *2 : t > 0.25in (6mm) *3 : t > 0.187in (15mm) *4 : OD ≤ 5in (127mm)

Product outline (applications and standards)

Developed seamless steel pipes and tubes for the chemical industry

Classification	Grade	Composition	Applicable standard			Characteristics ● Example of an application	Chemical composition (mass%)										Room-temperature tensile property		
			ASTM/ASME (example of a standard)	EN, etc.	JIS		C	Si	Mn	P	S	Ni	Cr	Mo	N	Others	TS, min. MPa	0.2% YS, min. MPa	EL, min. %
Austenitic stainless steel	YUS™270	20Cr-18Ni-6Mo-0.7Cu-0.2N-LC	ASTM S31254	1.4547	JIS G3463 SUS312LTB	High corrosion resistance (pitting corrosion resistance, seawater resistance and acid resistance): ● Heat exchanger pipes and tubes for seawater desalination plants ● Seawater heat exchanger pipes and tubes for various chemical plants ● Food plant pipes handling high salinity	0.020max.	0.80max.	1.00max.	0.030max.	0.015max.	17.50~19.50	19.00~21.00	6.00~7.00	0.16~0.25	Cu:0.50~1.00	650	300	35
	347AP	18Cr-10Ni-0.3Nb-ULC	ASTM S34751 ASME CC2196			Polythionic acid stress corrosion crack resistance, weld crack resistance and stress relaxation crack resistance: ● Petroleum refining plant furnace tubes	0.005~0.020	1.00max.	2.00max.	0.045max.	0.030max.	9.0~13.0	17.0~19.0	—	0.06~0.10	Nb:0.20~0.50 Nb ≥ 15 × C%	515	205	35
	NEXAGE™ 347AIPha	18Cr-11Ni-3Cu-Mo-Nb-B-N-ULC	ASTM S34752 ASME CC2984			Polythionic acid stress corrosion crack resistance, weld crack resistance and stress relaxation crack resistance High-temperature strength ● Petroleum refining plant furnace tubes	0.005~0.020	0.60max.	2.00max.	0.035max.	0.010max.	10.0~13.0	17.0~19.0	0.20~1.20	0.06~0.12	Cu:2.50~3.50 B:0.001~0.005 Nb:0.20~0.50 Nb ≥ 15 × C%	515	205	35
	NEXAGE™ 317CU	18Cr-16Ni-3.5Mo-4Cu	ASTM S31730			Sulfuric and hydrochloric acid dew point corrosion resistance (comparable to Ni-based alloy): ● Exhaust gas pipes and heat exchanger tubes for sulfur fuel boilers	0.030max.	1.00max.	2.00max.	0.040max.	0.010max.	15.0~16.5	17.0~19.0	3.0~4.0	0.045max.	Cu:4.0~5.0	480	175	35
	NEXAGE™ 317AP	17Cr-14Ni-3Mo-0.3Nb-N	ASTM S31740 ASME CC3038			Polythionic acid stress corrosion crack resistance, weld crack resistance and stress relaxation crack resistance Naphthenic acid corrosion resistance ● Petroleum refining plant furnace tubes	0.005~0.020	1.00max.	2.00max.	0.045max.	0.030max.	11.0~15.0	17.0~19.0	3.0~4.5	0.06~0.15	Nb:0.20~0.50 Nb ≥ 15 × C%	515	205	35
	HYDREXEL™	22Cr-13Ni-5Mn-2Mo-0.3N-Nb-V	ASME TPXM-19			Hydrogen embrittlement resistance, High strength ● High pressure gaseous hydrogen supply tubes for hydrogen stations	0.005~0.060	0.20~1.00	4.30~6.00	0.030max.	0.001max.	12.00~13.50	21.50~23.50	1.50~3.00	0.25~0.40	Nb:0.15~0.30 V:0.15~0.30	800	430	35
	HYDLIQUID™	22Cr-13Ni-5Mn-2Mo-0.3N-Nb-V	ASME TPXM-19			Hydrogen embrittlement resistance, high cryogenic toughness : ● liquefied hydrogen, LNG plant pipes	0.005~0.060	0.20~1.00	4.30~6.00	0.030max.	0.001max.	12.00~13.50	21.50~23.50	1.50~3.00	0.20~0.40	Nb:0.10~0.20 V:0.10~0.20	690	380	35
Duplex stainless steel	YUS™2120	21Cr-2Ni-3Mn-Cu-N			JIS G3459 SUS821L1TP		0.030max.	0.75max.	2.00~4.00	0.040max.	0.020max.	1.50~2.50	20.50~21.50	0.60max.	0.15~0.20	Cu:0.50~1.50	600	400	20
	YUS™2351	23Cr-5Ni-1Mo			JIS G3459 SUS329J1TP	High corrosion resistance (stress corrosion crack, general corrosion and crevice corrosion resistance): ● Heat exchanger pipes and tubes for various chemical plants	0.080max.	1.00max.	1.50max.	0.040max.	0.030max.	3.00~6.00	23.00~28.00	1.00~3.00	—	—	600	400	20
	DP11A	24Cr-4Ni-Mo-Cu-N					0.030max.	1.5max.	2.00max.	0.040max.	0.015max.	3.0~5.0	22.0~25.0	0.15~0.50	0.05~0.25	Cu:1.0~2.0	600	400	25
	DP12	25Cr-7Ni-2.7Mo-W-N	S31260 (ASTM A789)		JIS G3463 SUS329J4LTB	High corrosion resistance (urea corrosion and stress corrosion crack resistance): ● Urea reactor tubes	0.030max.	1.00max.	1.50max.	0.040max.	0.030max.	5.5~7.5	24.00~26.00	2.50~3.50	0.08~0.30	—	620	450	18
	DP3 DP3N	25Cr-7Ni-3.3Mo-N-W	S31260 (ASTM A789)		JIS G3463 SUS329J4LTB	High corrosion resistance (pitting corrosion, seawater and crevice corrosion resistance): ● Seawater heat exchanger tubes for various chemical plants	0.030max.	1.00max.	1.50max.	0.040max.	0.030max.	5.5~7.5	24.00~26.00	2.50~3.50	0.08~0.30	—	620	450	18
	DP3W	25Cr-7Ni-3.2Mo-2W-N	S39274 (ASTM A789) ASME CC2427	NORSOK M-630/M-650		High corrosion resistance (pitting corrosion, seawater and crevice corrosion resistance): ● Umbilical tubes and seawater heat exchanger tubes	0.030max.	0.80max.	1.00max.	0.030max.	0.020max.	6.0~8.0	24.0~26.0	2.5~3.5	0.24~0.32	Cu:0.20~0.80 W:1.50~2.50	800	550	15
	DP28W™	27.5Cr-7.7Ni-2.2W-Mo-N	S32808 (ASTM A789) ASME CC2496			High corrosion resistance (urea corrosion and stress corrosion crack resistance): ● Urea reactor tubes	0.030max.	0.50max.	1.10max.	0.030max.	0.010max.	7.0~8.2	27.0~27.9	0.80~1.20	0.30~0.40	W:2.10~2.50	800	550	15
Ferritic stainless steel	YUS™190	19Cr-2Mo-Ti-Nb-ULC-LN	ASTM TP444	1.4521	JIS G3463 SUS444TB	Stress corrosion crack resistance (general corrosion resistance at SUS304 or higher): ● Heat exchanger pipes and tubes for various chemical plants ● Small hot-water/steam boilers	0.015max.	0.50max.	0.50max.	0.040max.	0.030max.	—	18.00~20.00	1.75~2.25	0.025max.	Ti%+Nb% ≥ 16 × (C%+N%)	410	245	20
High Ni alloy	HK4M	25Cr-25Ni				Oxidation resistance, carburization resistance, and high-temperature strength (700 to 1,100°C) ● Cracking tubes for ethylene plants ● Furnace pipes for hydrogen refineries ● Example of use: HK4M to 1,050°C and HPM to 1,100°C	0.20~0.30	0.75max.	1.50max.	0.020max.	0.030max.	24.00~26.00	24.00~26.00	—	—	Ti:0.20~0.60 Al:0.20~0.60 B:0.002~0.007	520	235	25
	NEXAGE™ HR24	25Cr-38Ni-Mo-Si					0.10~0.20	1.40~2.00	1.50max.	0.020max.	0.030max.	37.00~40.00	23.00~26.00	1.00~3.00	—	Ti:0.20~0.60 B:0.010max. Zr:0.050max.	520	206	25
Ni-based alloy	NEXAGE™ 845	22.5Cr-47Ni-3Cu-6Mo-3.5W	N06845 (ASTM B423) ASME CC2794			Pitting corrosion resistance and acid resistance (sulfuric acid, hydrochloric acid, nitric acid, formic acid, etc.) ● Highly corrosion-resistant pipes and heat exchanger tubes for the chemical industry	0.05max.	0.5max.	0.5max.	—	0.010max.	44.0~50.0	20.0~25.0	5.0~7.0	—	Cu:2.0~4.0 W:2.0~5.0	690	276	30
	NEXAGE™ 696	30Cr-60Ni-2Cu-1.5Si	N06696 (ASTM B167) ASME CC2652			Metal dusting resistance, carburization resistance, and high-temperature strength ● Heating furnace pipes for synthetic gas plants ● High-temperature pipes for direct reduction iron plants	0.15max.	1.0~2.5	1.0max.	—	0.010max.	Remnant	28.0~32.0	1.0~3.0	—	Fe:2.0~6.0 Cu:1.5~3.0 Ti:1.0max.	586	240	30
	NEXAGE™ 201	Ni-Low C-Nb	N02201 (ASTM B163)	2.4068		Easy handling Ni ● Heat exchanger tube for caustic soda and hydrogen chloride plants	0.02max.	0.35max.	0.35max.	—	0.01max.	99.0min.	—	—	—	Fe:0.40max. Cu:0.25max Nb:Added	345	83	40

Note 1: DP28W™ is steel developed jointly with Toyo Engineering Corporation.

UNS No.