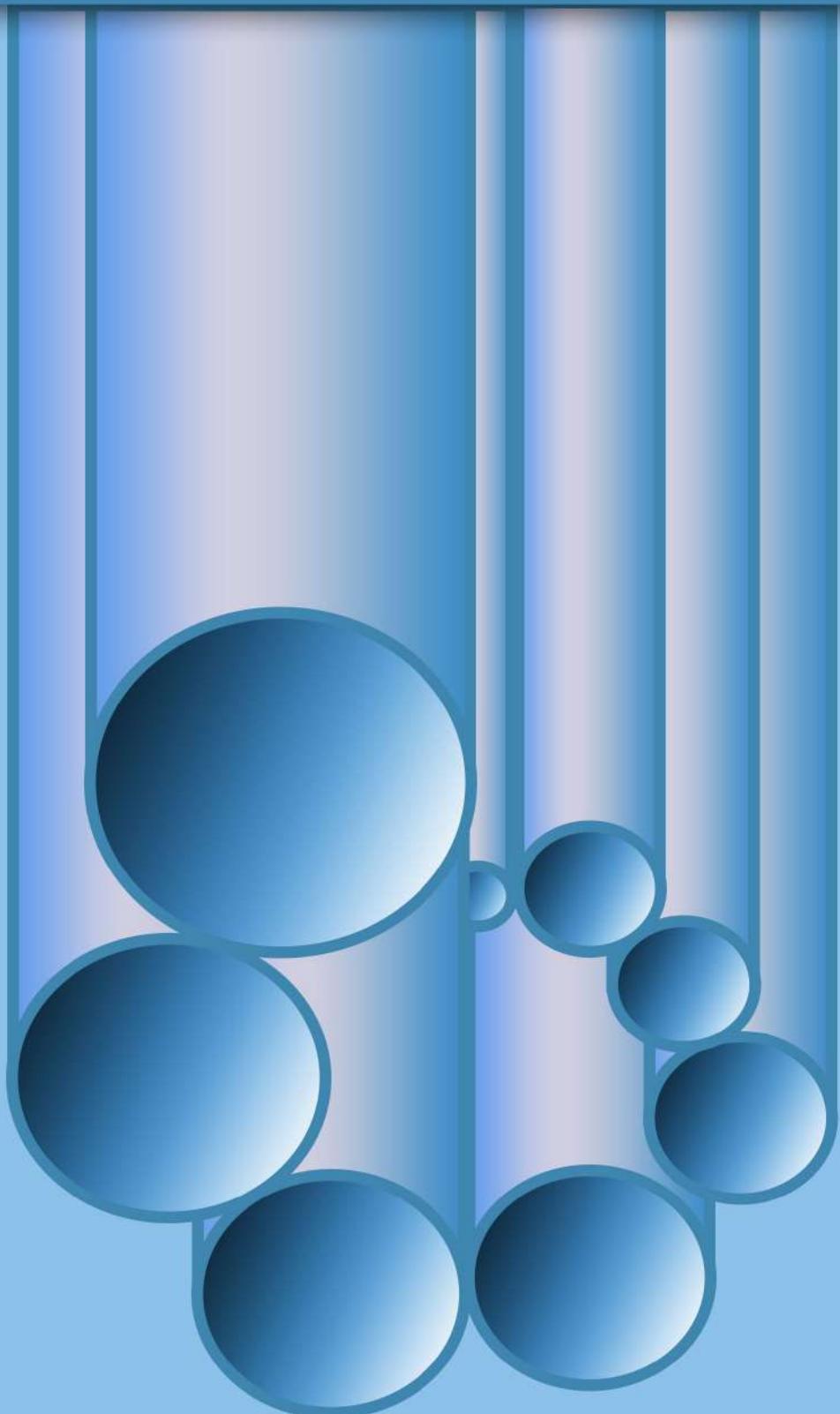


# NIPPON STEEL PIPE & TUBE



**NIPPON STEEL PIPE & TUBE**

## Production Control and Quality Assurance

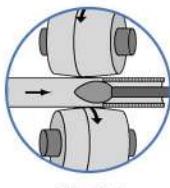
Nippon Steel's sophisticated equipment, expertise and technology make it possible to manufacture and supply pipe to your complete satisfaction.

Throughout the processes and operations of Nippon Steel's integrated steel production, exacting production control and quality assurance systems are in effect. Every pipe produced by the company must be certified as having met all the specified quality requirements before it is shipped from the mill. Examples of our pipe manufacturing methods include: (1) computer-aided production control and quality control of all operations, from raw material handling to shipment of finished products; (2) employment of the latest advances in technology for the manufacture of pipe having the exact quality to suit specific needs and applications; and (3) inspection systems so designed as to meet particular purposes, as exemplified by the extensive and effective use of nondestructive testing equipment such as ultrasonic, eddy-current, X-ray and magnetic testers.

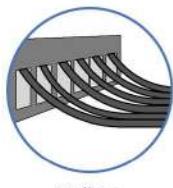
All incoming orders are processed at the company's Tokyo head quarters. Orders are input into a computer, which specifies the quality of each product to suit the intended use, then dispatches this data to the computer at the steel mill which is the best positioned to handle the manufacture of the products. Given the quality design, the mill performs the process design based on the materials best suited to meet the quality requirements of the order.



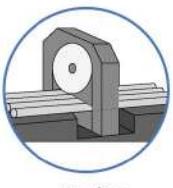
We use billets that have undergone tapping casting, blooming, and rolling in our Kimistu Works to produce seamless steel pipes and tubes by the Mannesmann plug mill method. Tokyo Works produces high-quality hot seamless steel pipes and tubes, using piercing mills, rolling mills, reeling mills, sizing mills, and stretch reducers on billets heated to high temperatures. We also produce high-grade cold product through cold processes using cold drawing equipment and a wide range of heat treatment furnaces in order to satisfy the continuously rising expectations of customers.



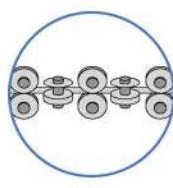
Piercing



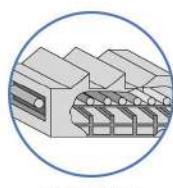
Rolling



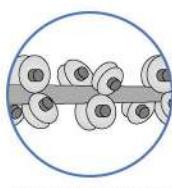
Reeling



Sizing



Reheating



Stretch Reducing



Billet heating furnace



Piercing mill



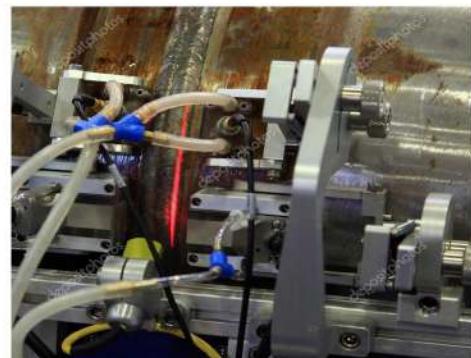
Rolling mill (plug mill)



Stretch reducing mill



Heat transfer furnace



Nondestructive inspection device

Nippon Steel continues its development and improvement efforts so as to be able to manufacture [pipe to any designated standards to fulfill your specific requirements. Some representative standards and specifications are tabulated below along with the corresponding manufacturing process employed at Nippon Steel to ensure compliance; the company manufacture pipe to other international standards, too.

Also available are Nippon Steel standards for special use such as Weldable High Tensile Strength Pipe, All - Weather High Tensile Strength Pipe, Anti-abrasion High Tensile Strength Pipe and Sea Water Resistance Pipe.

When you require quality and reliability, Nippon Steel has the pipe products you need.

STANDARDS	Seamless Pipe		Welded Pipe				
	MM	HE	ERW	CW	UO	SP	BR
<b>API (American Petroleum Institute)</b>							
5L Line Pipe	●		●	●	●	●	●
5CT Casting and Tubing		●	●				
5D Drill Pipe							
2B Fabricated Structural Steel Pipe					●		●
<b>AS (Australian Standards)</b>							
1836 Welded Steel Tubes for Pressure Purpose							
<b>ASTM (American Society for Testing and Materials)</b>							
A53 Black and Hot - Dipped Zinc - coated (galvanized) Welded Seamless Steel Pipe	●		●	●			
A106 Seamless Carbon Steel Pipe for High Temperature Services	●						
A135 Electric Resistance Welded Steel Pipe			●				
A178 Electric Resistance Welded Carbon Steel and Carbon Manganese Steel Boiler Tubes			●				
A213 Seamless Ferritic and Austentic Alloy - Steels Boiler Superheater and Heat-Exchanger Tubes	●	●					
A214 Electric Resistance Welded Carbon Steel Heat - Exchanger and Condenser Tubes				●			
A250 Electric Resistance Welded Carbon Molybdenum Alloy Steel Boiler and Superheater Tubes				●			
A252 Welded and Seamless Steel Pipe Piles			●		●	●	●
A268 Seamless and Welded Ferritic and Martenitic Stainless Steel Tubing for General Services			●				
A269 Seamless and Welded Austenitic Stainless Steel Tubing for General Services			●				
A312 Seamless and Welded Austenitic Stainless Steel Pipes			●				
A333 Seamless and Welded Steel Pipe for Low - Temperature Services	●						
A334 Seamless and Welded Carbon and Alloy - Steel Tubes for Low - Temperature Services	●						
A335 Seamless Ferritic Alloy - Steel Pipe for High Temperature Services	●						
A376 Seamless and Austenitic Steel Pipe for High - Temperature Central - Station Services			●				
A423 Seamless and Electric Welded Low - Alloy Steel Tubes				●			
A513 Electric Resistance Welded Carbon and Alloy Steel Mechanical Tubing				●			
<b>AWWA (American Water Works Association)</b>							
C200 Steel Water Pipe						●	●
C203 Standard for Coal - Tar Enamel Protective Coating for Steel Water Pipe						●	●
<b>GOST (USSR Specification)</b>							
10704 Electric - Welded Steel Tubes					●		
10705 Specification for Delivery of Electric - Welded Steel Tubes of 8-530 mm in diameter				●			

# Nippon Steel Corporation

ASTM A53 Plain Ends, Threads and Coupling

ASTM A106 Plain Ends

Nominal Size	Outside Diameter		Wall Thickness			Weight		Test Pressure Grade A	
	Inch	Inch	mm	Inch	mm	Sch. NO.	Lbs/ft	Kg/m	Psi
1/2"	0.840	21.30	0.109	2.77	40 (STD)	0.85	1.26	700	49
			0.147	3.73	80 (XS)	1.09	1.62	850	60
3/4"	1.050	26.70	0.113	2.87	40 (STD)	1.13	1.68	700	49
			0.154	3.91	80 (XS)	1.47	2.19	850	60
1"	1.315	33.40	0.133	3.38	40 (STD)	1.68	2.5	700	49
			0.179	4.55	80 (XS)	2.17	3.23	850	60
1-1/4"	1.660	42.20	0.140	3.56	40 (STD)	2.27	3.38	1000	70
			0.191	4.85	80 (XS)	3.00	4.46	1500	105
1-1/2"	1.900	48.30	0.145	3.68	40 (STD)	2.72	4.05	1000	70
			0.200	5.08	80 (XS)	3.63	5.4	1500	105
2"	2.375	60.30	0.154	3.91	40 (STD)	3.65	5.43	2300	162
			0.218	5.54	80 (XS)	5.02	7.47	2500	176
2-1/2"	2.875	73.00	0.203	5.16	40 (STD)	5.79	8.62	2500	176
			0.276	7.01	80 (XS)	7.66	11.4	2500	176
3"	3.500	88.90	0.216	5.49	40 (STD)	7.58	11.28	2220	156
			0.300	7.62	80 (XS)	10.25	15.25	2500	176
3-1/2"	4.000	101.60	0.226	5.74	40 (STD)	9.11	13.56	2030	143
			0.318	8.08	80 (XS)	12.51	18.62	2800	197
4"	4.500	114.30	0.237	6.02	40 (STD)	10.79	16.06	1900	134
			0.337	8.56	80 (XS)	14.98	22.29	2700	190
5"	5.563	141.30	0.258	6.55	40 (STD)	14.62	21.76	1670	117
			0.375	9.53	80 (XS)	20.78	30.92	2430	171
6"	6.625	168.30	0.280	7.11	40 (STD)	18.97	28.23	1520	107
8"	8.625	219.10	0.250	6.35	20	22.36	33.28	1040	73
			0.277	7.04	30	24.7	36.76	1160	82
			0.322	8.18	40 (STD)	28.55	42.79	2000	94
10"	10.750	273.00	0.250	6.35	20	28.04	41.73	840	59
			0.279	7.09	~	31.2	46.43	930	65
			0.307	7.80	30	34.24	50.95	1030	72
			0.365	9.27	40 (STD)	40.48	60.24	2000	86
12"	12.750	323.80	0.330	8.38	30	43.77	65.14	930	65
			0.375	9.53	STD	49.56	73.75	1060	75
			0.406	10.31	40 (STD)	53.65	82.1	2000	85
14"	14.000	355.60	0.312	7.92	20	45.61	67.94	800	56
			0.375	9.53	30 (STD)	54.57	81.21	960	67
			0.438	11.1	40 (STD)	62.33	101.68	2500	68
16"	16.000	406.40	0.312	7.92	20	52.27	77.86	700	49
			0.375	9.53	30 (STD)	62.58	93.13	840	59
			0.500	12.7	40 (STD)	70.5	134.48	2500	72
18"	18.000	457.20	0.312	7.92	20	58.94	87.79	620	44
			0.375	9.53	STD	70.59	105.05	750	53
			0.562	14.27	40 (STD)	82.35	170.56	2500	66
20"	20.000	508.00	0.375	9.53	20 (STD)	78.6	117.07	680	48
			0.594	15.1	40 (STD)	88.3	200.08	2500	59
22"	22.000	559.00	0.375	9.53	20 (STD)	98.68	137.76	2000	52
24"	24.000	609.60	0.375	9.53	20 (STD)	104.33	150.88	2000	61
			0.688	17.47	40 (STD)	115.94	275.94	2500	75

Other sizes and specifications according to ASTM standards are available on request

## *On the Leading Edge:Nippon Steel*

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# **NIPPON STEEL**

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