奥蓝德钢管
ALLLAND STEEL PIPE

ASTM A252

- ALLLAND Production Standards Overview

Definition and Applications

1. Definition

ASTM A252 is a welding specification for spiral steel pipe piles issued by the American Society for Testing and Materials. It covers uncoated welded steel pipe piles that are manufactured through resistance welding or submerged arc welding processes and are designed to withstand longitudinal loads.The main steel grades include Grade 1, Grade 2, and Grade 3.

2. ALLLAND ASTM A252 Steel Pipe Dimensions

Parameters	Dimensions
O.D.	273 mm – 914 mm（10" – 36"）
WT	≥6.4mm （0.25”）
Length	4.88 m – 7.62 m（16' – 25'）
Material	ASTM A252 Grade 1 / 2 / 3
Process	SSAW / ERW
Connection	Butt-weld

3. Application

ASTM A252 is Applied to foundation engineering of buildings, as friction piles or end-bearing piles, it transfers the load of the building to the deep and stable soil layer or rock layer.

Critical Tolerances

Our ASTM A252 standard steel pipes are manufactured in strict compliance with the specification requirements.

Item	Tolerance
O.D.	±1%
WT	±10% / ±12.5%
Length	+75mm & -0mm

Chemical and Mechanical Properties

1. Chemical Composition (wt%, max)

Element	Composition, %		
	Grade 1	Grade 2	Grade 3
C, max	0.26	0.30	0.30
Mn, max	1.35	1.40	1.40
P, max	0.050	0.040	0.030
S, max	0.050	0.040	0.030
Si	0.15 - 0.30	0.15 - 0.40	0.15 - 0.50

2. Mechanical Properties

Grade		Tensile Strength, min	Yield Strength, min
Grade 1	psi	50000	30000
	MPa	345	205
Grade 2	psi	60000	35000
	MPa	415	240
Grade 3	psi	66000	45000
	MPa	455	310

Dimension Specifications Table

Outside demension			Wall thickness （mm）						
Size	Inch	OD	SCH5S	SCH10S	SCH10	SCH 20	SCH30	SCH40	SCH60
DN6	1/8"	10.3	-	1.24	-	-	-	1.73	-
DN8	1/4"	13.7	-	1.65	-	-	-	2.24	-
DN10	3/8"	17.1	-	1.65	-	-	-	2.31	-
DN15	1/2"	21.3	1.65	2.11	-	-	-	2.77	-
DN20	3/4"	26.7	1.65	2.11	-	-	-	2.87	-
DN25	1"	33.4	1.65	2.77	-	-	-	3.38	-

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DN32	1 1/4"	42.2	1.65	2.77	-	-	-	3.56	-
DN40	1 1/2"	48.3	1.65	2.77	-	-	-	3.68	-
DN50	2"	60.3	1.65	2.77	-	-	-	3.91	-
DN65	2 1/2"	73	2.11	3.05	-	-	-	5.16	-
DN80	3"	88.9	2.11	3.05	-	-	-	5.49	-
DN90	3 1/2"	101.6	2.11	3.05	-	-	-	5.74	-
DN100	4"	114.3	2.11	3.05	-	-	-	6.02	-
DN125	5"	141.3	2.77	3.4	-	-	-	6.55	-
DN150	6"	168.3	2.77	3.4	-	-	-	7.11	-
DN200	8"	219.1	2.77	3.76	-	6.35	7.04	8.18	10.31
DN250	10"	273.1	3.4	4.19	-	6.35	7.8	9.27	12.7
DN300	12"	323.9	3.96	4.57	-	6.35	8.38	10.31	14.27
DN350	14"	355.5	3.96	4.78	6.35	7.92	9.53	11.13	15.09
DN400	16"	406.4	4.19	4.78	6.35	7.92	9.53	12.7	16.66
DN450	18"	457.2	4.19	4.78	6.35	7.92	11.13	14.27	19.05
DN500	20"	508	4.78	5.54	6.35	9.53	12.7	15.09	20.62
DN550	22"	558.8	4.78	5.54	6.35	9.53	12.7	-	22.23
DN600	24"	609.6	5.54	6.35	6.35	9.53	14.27	17.48	24.61
DN650	26"	660.4	-	-	7.92	12.7	-	-	-
DN700	28"	711.6	-	-	7.92	12.7	15.88	-	-
DN750	30"	762	6.35	7.92	7.92	12.7	15.88	-	-
DN800	32"	812.8	-	-	7.92	12.7	15.88	17.48	-
DN850	34"	863.6	-	-	7.92	12.7	15.88	17.48	-
DN900	36"	914.4	-	-	7.92	12.7	15.88	19.05	-
DN950	38"	965.2	-	-	-	-	-	-	-
DN1000	40"	1015	-	-	-	-	-	-	-
DN1050	42"	1066.8	-	-	-	-	-	-	-
DN1100	44"	1117.6	-	-	-	-	-	-	-
DN1150	46"	1188.4	-	-	-	-	-	-	-
DN1200	48"	1219.2	-	-	-	-	-	-	-

Outside demension			Wall thickness （mm）							
Size	Inch	OD	SCH 80	SCH 100	SCH120	SCH140	SCH160	STD	XS	XXS
DN6	1/8"	10.3	2.42	-	-	-	-	1.73	2.41	-
DN8	1/4"	13.7	3.02	-	-	-	-	2.24	3.02	-
DN10	3/8"	17.1	3.2	-	-	-	-	2.31	3.2	-
DN15	1/2"	21.3	3.73	-	-	-	4.78	2.77	3.73	7.47
DN20	3/4"	26.7	3.91	-	-	-	5.56	2.87	3.91	7.82
DN25	1"	33.4	4.55	-	-	-	6.35	3.38	4.55	9.09
DN32	1 1/4"	42.2	4.85	-	-	-	6.35	3.58	4.85	9.7
DN40	1 1/2"	48.3	5.05	-	-	-	7.14	3.68	5.08	10.15
DN50	2"	60.3	5.54	-	-	-	8.74	3.91	5.54	11.07
DN65	2 1/2"	73	7.01	-	-	-	9.53	5.16	7.01	14.02
DN80	3"	88.9	7.62	-	-	-	11.13	5.49	7.52	15.24
DN90	3	101.6	8.08	-	-	-	-	5.74	8.08	-

	1/2"									
DN100	4"	114.3	8.58	-	11.13	-	13.49	6.02	8.56	17.12
DN125	5"	141.3	9.53	-	12.7	-	15.88	6.55	9.53	18.05
DN150	6"	168.3	10.97	-	14.27	-	18.26	7.11	10.97	21.95
DN200	8"	219.1	12.7	15.09	18.26	20.62	23.01	8.18	12.7	22.23
DN250	10"	273.1	15.09	18.26	21.44	25.4	28.58	9.27	12.7	25.4
DN300	12"	323.9	17.48	21.44	25.4	28.58	33.32	9.53	12.7	25.4
DN350	14"	355.5	19.05	23.83	27.79	31.75	35.71	9.53	12.7	-
DN400	16"	406.4	21.44	26.19	30.96	36.53	40.49	9.53	12.7	-
DN450	18"	457.2	23.83	29.36	34.93	39.67	45.24	9.53	12.7	-
DN500	20"	508	26.19	32.54	38.1	44.45	50.01	9.53	12.7	-
DN550	22"	558.8	28.58	34.93	41.28	47.63	53.98	9.53	12.7	-
DN600	24"	609.6	30.96	38.89	46.02	52.37	59.54	9.53	12.7	-
DN650	26"	660.4	-	-	-	-	-	9.53	12.7	-
DN700	28"	711.6	-	-	-	-	-	9.53	12.7	-
DN750	30"	762	-	-	-	-	-	9.53	12.7	-
DN800	32"	812.8	-	-	-	-	-	9.53	12.7	-
DN850	34"	863.6	-	-	-	-	-	9.53	12.7	-
DN900	36"	914.4	-	-	-	-	-	9.53	12.7	-
DN950	38"	965.2	-	-	-	-	-	9.53	12.7	-
DN1000	40"	1015	-	-	-	-	-	9.53	12.7	-
DN1050	42"	1066.8	-	-	-	-	-	9.53	12.7	-
DN1100	44"	1117.6	-	-	-	-	-	9.53	12.7	-
DN1150	46"	1188.4	-	-	-	-	-	9.53	12.7	-
DN1200	48"	1219.2	-	-	-	-	-			

Testing Requirements

1. Tensile Test

- Verify the yield strength and tensile strength.

2. Compression Test

- Test the ductility of the weld seam and the base material.

3. Bending Test

- Evaluate the bending performance of the materials.

4. Static Water Pressure Test

- Each steel pipe must be inspected to ensure its pressure-bearing integrity.

5. Non-destructive Electrical Test

- Perform eddy current or ultrasonic testing on the weld seam to detect any defects.

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Surface treatment

Method: Oil Coating, Black Coating, Clear Coating, FBE, 3LBE, 3LPP.

ALLLAND ASTM A252 Product Images

The image shows steel pipes actually produced by our company