奥蓝德钢管
ALLLAND STEEL PIPE

JIS G3444 STK540

- ALLLAND Production Standards Overview

Definition and Applications

1. Definition

JIS G3444 STK540 Steel Pipe is a high-strength carbon steel structural tube manufactured according to **Japanese Industrial Standard JIS G3444 – Carbon Steel Tubes for General Structural Purposes**.

With a minimum tensile strength of **540 MPa**, STK540 offers excellent mechanical strength, weldability, and durability. It is widely used in heavy-duty structural applications, including **steel towers, bridge structures, foundation piles, industrial frameworks, and civil engineering projects**.

2. ALLLAND JIS G3444 STK540 Steel Pipe Dimensions

Item	Specification
Standard	JIS G3444 – Carbon Steel Tubes for General Structural Purposes
Pipe Type	Structural Carbon Steel Tube
Grade	STK540
Outside Diameter	21.7 mm – 660 mm
Wall Thickness	2.0 mm – 25 mm
Length	6 m / 12 m / Customized
Manufacturing Process	ERW / Seamless / Welded Steel Pipe
Pipe End	Plain End, Beveled End, Threaded End (Optional)
Surface Treatment	3PE, FBE, Epoxy Coating, Galvanizing (Optional)

3. Application

JIS G3444 STK540 Steel Pipe is widely used in high-strength structural applications, including steel towers, foundation piles, bridge structures, industrial buildings, and civil engineering projects. With excellent tensile strength, structural stability, and weldability, STK540 steel pipe is designed for heavy-load structures requiring reliable performance and long-term durability.

Critical Tolerances

The dimensional tolerances of ALLLAND JIS G3444 STK540 Steel Pipe comply with **JIS G3444 Carbon Steel Tubes for General Structural Purposes** requirements. Strict control of outside diameter, wall thickness, and length ensures accurate installation and reliable structural performance.

Item	Tolerance Requirement
Outside Diameter (OD)	
OD ≤ 50 mm	±0.5 mm
OD > 50 mm	±1% of OD
Wall Thickness (WT)	
WT ≤ 4 mm	±0.6 mm
WT > 4 mm	±15%
Length	According to JIS G3444 requirements or customer specifications
Straightness	Shall be within the specified requirements of JIS G3444
Pipe Ends	End finishing controlled according to customer requirements
Surface Condition	Free from defects that may affect structural performance

Note: Dimensional tolerances may vary depending on pipe manufacturing method, size range, and customer project requirements.

Chemical and Mechanical Properties

1. Chemical Composition

Element	Maximum / Required Value (%)
Carbon (C)	0.30 max
Manganese (Mn)	1.60 max
Phosphorus (P)	0.040 max
Sulfur (S)	0.040 max
Silicon (Si)	0.55 min

2. Mechanical Properties

Property	Requirement
Tensile Strength	≥ 540 MPa
Yield Strength	≥ 390 MPa
Elongation	≥ 23% (for standard test conditions)

Flattening Test	Required according to JIS G3444
Weldability	Suitable for structural welding applications

Dimension Specifications Table

ALLLAND JIS G3444 STK540 Steel Pipe is available in a wide range of outside diameters and wall thicknesses to meet structural engineering requirements. Dimensions are manufactured according to **JIS G3444** specifications, with customized sizes available upon request.

Nominal Size	Outside Diameter (OD)	Wall Thickness (WT)	Approx. Weight
1/2"	21.7 mm	2.0 mm	1.03 kg/m
3/4"	27.2 mm	2.0 mm	1.31 kg/m
1"	34.0 mm	2.3 mm	1.86 kg/m
1-1/4"	42.7 mm	2.3 mm	2.35 kg/m
1-1/2"	48.6 mm	2.3 mm	2.69 kg/m
2"	60.5 mm	2.3 mm	3.35 kg/m
2-1/2"	76.3 mm	2.8 mm	5.07 kg/m
3"	89.1 mm	3.2 mm	6.79 kg/m
4"	114.3 mm	4.5 mm	12.2 kg/m
5"	139.8 mm	4.5 mm	15.0 kg/m
6"	165.2 mm	5.0 mm	19.9 kg/m
8"	216.3 mm	6.0 mm	31.0 kg/m
10"	267.4 mm	6.6 mm	42.7 kg/m
12"	318.5 mm	6.9 mm	53.4 kg/m
14"	355.6 mm	8.0 mm	68.7 kg/m
16"	406.4 mm	9.0 mm	88.5 kg/m
18"	457.2 mm	10.0 mm	111 kg/m
20"	508.0 mm	12.0 mm	146 kg/m

Quality Inspection & Testing

Inspection Item	Testing Method
Chemical Composition	Spectrometer Analysis
Tensile Strength	Tensile Test
Yield Strength	Tensile Test
Elongation	Tensile Test
Dimension Inspection	OD / WT Measurement
Weld Quality	Ultrasonic Testing (UT)
Surface Inspection	Visual Inspection
Flattening Test	According to JIS G3444

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ALLLAND JIS G3444 STK540 Product Images

The image shows steel pipes actually produced by our company