

JIS G3444 STK490

- ALLLAND Production Standards Overview



Definition and Applications

1. Definition

JIS G3444 STK490 Steel Pipe is a high-strength carbon steel structural tube designed for applications requiring higher load-bearing capacity and improved structural performance. Compared with STK400, STK490 provides higher tensile strength and yield strength, making it suitable for heavy-duty steel structures, construction frameworks, towers, bridges, and industrial facilities.

Manufactured by ALLLAND under strict quality control procedures, STK490 steel pipes feature accurate dimensions, reliable mechanical properties, excellent weldability, and stable performance for demanding structural applications.

2. ALLLAND JIS G3444 STK490 Steel Pipe Dimensions

Item	Specification
Standard	JIS G3444
Grade	STK490
Product Type	Carbon Steel Structural Pipe
Manufacturing Process	ERW / Seamless
Material	Carbon Steel
Outside Diameter	21.7–1016 mm
Wall Thickness	2.0–22 mm
Length	5.8 m / 6 m / 12 m / Customized
Surface Treatment	Black, Hot Dip Galvanized, FBE, 3PE/3LPE

3. Application

JIS G3444 STK490 Steel Pipes are widely used in heavy structural applications where high strength and durability are required. They are commonly applied in building structures, steel towers, bridge components, large-scale construction projects, machinery supports, and industrial facilities. With superior strength compared with standard structural tubes, STK490 provides reliable performance for load-bearing structures and engineering projects requiring enhanced structural stability.

Critical Tolerances

Item	Tolerance
Outside Diameter	±1% (OD ≥ 50 mm)
Wall Thickness	±10%
Length	+50 mm / -0 mm
Straightness	≤0.15% of pipe length
Ovality	Within OD tolerance

Specific tolerances can be customized according to project requirements.

Chemical and Mechanical Properties

1. Chemical Composition

Grade	C (Max)	Si	Mn	P (Max)	S (Max)
STK490	0.18%	—	—	0.040%	0.040%

2. Mechanical Properties

Grade	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)
STK490	≥490	≥325	≥23

Dimension Specifications Table

Outside Diameter (mm)	Wall Thickness (mm)
21.7	2.0
27.2	2.0 / 2.3
34.0	2.3
42.7	2.3 / 2.5
48.6	2.3–3.2
60.5	2.3–4.0
76.3	2.8–4.0
89.1	3.2–4.5
101.6	3.2–5.0
114.3	3.2–6.0



Outside Diameter (mm)	Wall Thickness (mm)
139.8	3.6–6.0
165.2	4.5–8.0
216.3	6.0–10.0
267.4	6.0–12.0
318.5	8.0–14.0
406.4–1016	Customized

Manufacturing & Quality Control

ALLLAND JIS G3444 STK490 Steel Pipes are manufactured through controlled production processes:

Steel Coil → Forming → ERW Welding → Sizing → Cutting → Inspection → Marking → Packing

Quality inspections include:

- ✓ Chemical Composition Analysis
- ✓ Tensile Test
- ✓ Flattening Test
- ✓ Dimensional Inspection
- ✓ Weld Inspection
- ✓ Ultrasonic Testing (UT)
- ✓ Hydrostatic Test (Optional)

ALLLAND JIS G3444 STK490 Product Images



The image shows steel pipes actually produced by our company