

EN 10219 S275

- ALLLAND Production Standards Overview



Definition and Applications

1. Definition

EN 10219 S275 Structural Hollow Section is a cold-formed welded hollow section manufactured according to the European standard EN 10219. Compared with S235, S275 offers higher yield strength, providing improved load-bearing capacity and structural performance for demanding engineering applications.

ALLLAND supplies **S275JRH Circular Hollow Sections (CHS)**, **Square Hollow Sections (SHS)**, and **Rectangular Hollow Sections (RHS)** with accurate dimensions, stable mechanical properties, and strict quality control for construction, industrial, and infrastructure projects.

2. ALLLAND EN 10219 S275 Structural Hollow Section Dimensions

Item	Specification
Standard	EN 10219
Grade	S275JRH / S275JR
Product Type	Welded Structural Hollow Section
Section Type	CHS / SHS / RHS
Manufacturing Process	Cold Formed + HFW/ERW Welding
Material	Non-alloy Structural Steel
CHS Size Range	21.3–610 mm
SHS Size Range	20×20–300×300 mm
RHS Size Range	40×20–400×200 mm
Wall Thickness	1.5–25 mm
Standard Length	6 m / 12 m
Surface Treatment	Black, Galvanized, Coated

3. Application

EN 10219 S275 Steel Hollow Sections are widely used in structural applications requiring higher strength and durability. They are commonly applied in steel buildings, industrial structures, bridges, platforms, machinery supports, transmission towers, and heavy-duty construction projects. With excellent weldability and enhanced load-bearing performance, S275 hollow sections provide a reliable solution for modern structural engineering.

Critical Tolerances

EN 10219 S275 Hollow Sections require strict dimensional accuracy to ensure proper fabrication and structural reliability.

Item	Tolerance
Outside Diameter (CHS)	±1% (Min. ±0.5 mm)
Side Length (SHS/RHS)	±1%
Wall Thickness	±10%
Length	+500 mm / -0 mm
Straightness	≤0.2% of total length

Note: ASTM A106 Grade C pipes supplied by ALLLAND can be produced with customized dimensions, heat treatment, NDT inspection, and third-party inspection according to project requirements.

Chemical and Mechanical Properties

1. Chemical Composition

Grade	C (Max)	Mn (Max)	P (Max)	S (Max)	N (Max)
S275JRH	0.20%	1.50%	0.035%	0.035%	0.009%

2. Mechanical Properties

Grade	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation (%)
S275JRH	≥275	430–580	≥22

Dimension Specifications Table

1. EN 10219 S275 Circular Hollow Section (CHS)

Outside Diameter (mm)	Wall Thickness (mm)
21.3–48.3	2.0–5.0
60.3–114.3	2.0–8.0
139.7–219.1	4.0–16.0
273.0–323.9	6.0–20.0
355.6–508.0	8.0–25.0
610.0	Customized

2. EN 10219 S275 Square Hollow Section (SHS)

Section Size (mm)	Wall Thickness (mm)
20×20	1.5–3.0
40×40	2.0–5.0
60×60	3.0–6.0
80×80	3.0–8.0
100×100	4.0–10.0
150×150	5.0–12.5
200×200	6.0–16.0
250×250	8.0–20.0
300×300	10.0–25.0

3. EN 10219 S275 Rectangular Hollow Section (RHS)

Section Size (mm)	Wall Thickness (mm)
40×20	2.0–4.0
60×40	2.0–6.0
100×50	3.0–8.0
120×60	4.0–8.0
150×100	5.0–12.5
200×100	6.0–16.0
250×150	8.0–20.0
300×200	10.0–25.0
400×200	10.0–25.0

Surface Treatment Options

ALLLAND provides different surface solutions according to application environments.

Surface Type	Description	Application
Black Surface	Standard mill finish	General structural applications
Hot Dip Galvanized	Zinc coating for corrosion protection	Outdoor structures, towers, bridges
Pre-Galvanized	Zinc-coated before forming	Light structures, fabrication
FBE Coated	Fusion bonded epoxy coating	Corrosion-resistant applications
3PE / 3LPE Coated	Multi-layer polyethylene coating	Long-term outdoor protection

Standards & Compliance

Standard	Description
EN 10219-1	Technical delivery requirements
EN 10219-2	Tolerances, dimensions and sectional properties
EN 10204	Inspection documents and material certificates
EN 10025	Structural steel requirements

ALLLAND EN 10219 S275 Product Images



The image shows steel pipes actually produced by our company