



YAWATA 7018 For 490 N/mm² High Tensile Strength Steel

Classification

AWS A 5.1 : E7018
JIS Z 3211 : E4918

Approvals

ABS, BV, LR

Applications

Welding of 490 N/mm² high tensile strength steels for ships, steel frames, bridges and pressure vessels.

Characteristics

YAWATA 7018 is an iron powder low hydrogen type electrode containing a large amount of iron powder in coating flux. Deposited metal gives excellent mechanical properties, crack resistance and X-ray quality. Weldability is good and high welding efficiency is obtained.

Typical Chemical Composition of Deposited Metal (%)

C	Si	Mn	P	S
0.08	0.57	0.92	0.013	0.010

Typical Mechanical Properties of Deposited Metal

Tensile Strength N/mm ² (kgf/mm ²)	Yield Strength N/mm ² (kgf/mm ²)	Elongation %	Charpy 2V-notch at -29°C J (kgf.m)
530 (54)	460 (47)	33	110 (11.2)

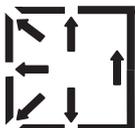
Sizes & Recommended Current Range (AC or DC +)

Diameter/ Length (mm)	2.6/300	3.2/350	4.0/400	5.0/450
Welding Position	Current (A)			
F	70~100	100~140	150~200	190~240
V, OH	60~90	80~120	120~160	140~180

Guideline in Usage

1. Use dry electrodes only. Damp electrodes should be re-dried at 300~350°C for 60 minutes before use.
2. Backstep method should be applied to prevent blowholes and pits at arc starting and arc length should be kept as short as possible during welding.
3. All water, rust and oil in groove should be completely removed to prevent cracks and blowholes.

Welding Positions



All positions, except vertical down