HYUNDAI WELDING

Rev. 02

# S – 308Mo.16

SHIELDED METAL ARC WELDING CONSUMABLE
FOR WELDING OF MOLYBDENUM CONTAINING
AUSTENITE STAINLESS STEEL

2020.12

HYUNDAI WELDING CO., LTD.

# S-308Mo.16

## ❖ Specification

| | |
|---|---|
| ***AWS A5.4*** | E308Mo-16 |
| ***JIS Z 3221*** | ES308Mo-16 |
| ***EN ISO 3581-A*** | E 20 10 3 |

## ❖ Applications

All positional lime-titania type electrode which is extremely suitable for welding molybdenum containing austenite stainless steel.
S-308Mo.16 can be used for welding such type as 316 stainless when increased ferrite is desired beyond that attainable with S-316.16N electrode.

## ❖ Characteristics on Usage

This electrode welds smoothly with low spatter and good slag detachability.

## ❖ Note on Usage

1. Dry the electrodes at 350℃(662°F) for 60 minutes before use.
2. Keep the arc as short as possible, and avoid large width of weaving.
3. Dirt such as oil and dust should be completely removed from groove.

## ❖ Type of Current

AC or DC+

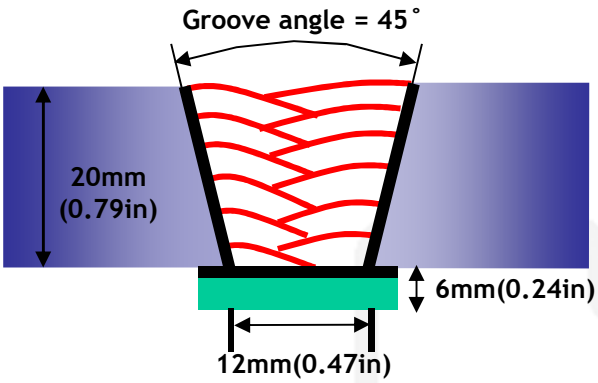
## ❖ Packing

| | |
|---|---|
| **Packet** | 2.5kg(5.5lbs) |
| **Carton** | 2.5kg(5.5lbs) X 4 : 10kg(22lbs) |

# Mechanical Properties & Chemical Composition of All Weld Metal

## ❖ Welding Conditions

Method by AWS Spec.




[ Joint Preparation & Layer Details ]

| | | |
|---|---|---|
| Diameter | : | 4.0mm(5/32in) |
| Amp./ Volt. | : | 140/25 |
| Travel speed | : | 13~18(Cm/min) |
| Pre-Heat | : | R.T . |
| Interpass Temp. | : | 150±15℃(302±59˚F) |
| Position | : | Flat |
| Polarity | : | AC or DC+ |

## ❖ Mechanical Properties of All weld metal

| Consumable | Tensile Test | |
|---|---|---|
| S-308Mo.16 | TS MPa (lbs/in²) | El(%) |
| | 621(90,000) | 42.3 |
| AWS A5.4 E308Mo-XX | ≥520(75,000) | ≥30 |

## ❖ Chemical Analysis of All weld metal(wt%)

| Consumable | Chemical Composition (%) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | C | Si | Mn | P | S | Ni | Cr | Mo | Cu |
| S-308Mo.16 | 0.03 | 0.65 | 0.77 | 0.032 | 0.017 | 9.7 | 18.5 | 2.3 | 0.02 |
| AWS A5.4 E308Mo-XX | ≤0.08 | ≤1.0 | 0.5 ~2.5 | ≤0.04 | ≤0.03 | 9.0 ~12.0 | 18.0 ~21.0 | 2.0~ 3.0 | ≤0.75 |

# Mechanical Properties & Chemical Composition of All Weld Metal

## ❖ δ – Ferrite No.

| Consumable | Diagram | | |
|---|---|---|---|
| | Schaeffler | Delong | WRC(1992) |
| S-308Mo.16 | 14.2 | 16.3 | 13.4 |