

S-309MoL.16

SHIELDED METAL ARC WELDING CONSUMABLE FOR WELDING OF DISSMILAR METALS STAINLESS STEELS AND CARBON STEELS OR STAINLESS STEELS AND LOW ALLOY METALS

2020.12

HYUNDAI WELDING CO., LTD.

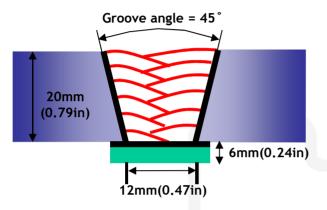
| | | S -30 | 09MoL.16 | | | |
|-----------------------------|---|--|----------|--|--|--|
| Specification | AWS A5.4 JIS Z 3221 EN ISO 3851-A | E309LMo-16 ES309LMo-16 E 23 12 2 L R | | | | |
| Applications | S-309MoL.16 is designed for welding of dissimilar metals such as Stainless steels and carbon steels or stainless steels and low alloy steels | | | | | |
| Characteristics on Usage | S-308MoL.16 is a lime- titania type electrode. S-309MoL.16 is for dissimilar welding such as stainless steel to carbon steel or low-alloy steels, and for under-layer welding on cladded side groove of cladded stainless steel. | | | | | |
| Note on Usage | it is mostly effective to proceed with welding. Keeping the arc as short as possible in flat position. Remove dirts such as oil and dust from the groove. Dry the electrode at 350℃(662°F) for 60 minutes before use. | | | | | |
| Type of Current | AC or DC+ | | | | | |
| ✤ Packing | Packet | 2.5kg(5.5lbs) | | | | |
| | Carton | 2.5kg(5.5lbs) X 4 : 10kg(22lbs) | | | | |

S -309MoL.16

Method by AWS Spec.

Mechanical Properties & Chemical Composition of All Weld Metal

*** Welding Conditions**



| 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+ |

[Joint Preparation & Layer Details]

* Mechanical Properties of All weld metal

| Consumable | Tensile Test | | CVN Impact Test Joule(ft·lbs) | |
|------------------------|---------------------|-------|----------------------------------|-------------|
| S 200Mal 16 | TS MPa (Ibs/in²) | EI(%) | -20℃(-4°F) | -60℃(-76°F) |
| S-309MoL.16 | 690(99,000) | 33.8 | 45(33) | 35(26) |
| AWS A5.4 E309MoL-XX | ≥520(75,000) | ≥30 | Not Specified | |

Chemical Analysis of All weld metal(wt%)

| Oceanity | Chemical Composition (%) | | | | | | | | |
|------------------------|--------------------------|------|-------------|-------|-------|---------------|---------------|-------------|-------|
| Consumable | С | Si | Mn | Р | S | Ni | Cr | Мо | Cu |
| S-309MoL.16 | 0.02 | 0.72 | 1.30 | 0.027 | 0.013 | 12.7 | 23.7 | 2.4 | 0.015 |
| AWS A5.4 E309LMo-XX | ≤0.04 | ≤1.0 | 0.5 ~2.5 | ≤0.04 | ≤0.03 | 12.0 ~14.0 | 22.0 ~25.0 | 2.0 ~3.0 | ≤0.75 |

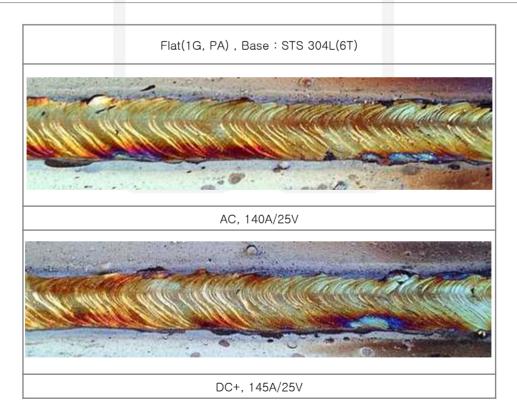
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Mechanical Properties & Chemical Composition of All Weld Metal

δ – Ferrite No.

| | | Diagram | FERITSCOPE MP-30 * | | |
|-------------|------------|---------|--------------------|-----------|--|
| Consumable | Schaeffler | Delong | WRC(1992) | (FISCHER) | |
| S-309MoL.16 | 11.5 | 18.0 | 12.5 | 14~19 | |

Bead Appearance



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Approvals

✤ AUTHORIZED APPROVAL DETAILS

| Consumable | DNV | TUV | CE | |
|-------------|---------|-----------------------|-----------------------|--|
| | 309LMo | EN 1600 E 23 12 2 L R | EN 1600 E 23 12 2 L R | |
| S-309MoL.16 | 2.0~5.0 | 2.0~5.0 | 2.0~5.0 | |
| | | | | |



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