



**Changzhou Giant Welding Co.,Ltd**

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| Standard:<br>AWS A 5.9<br>YB/T5092 | Chemical Composition    %                                                                                                                                                                                                                                                                                                                                                       |           |            |          |                                      |           |                |       |       |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|----------|--------------------------------------|-----------|----------------|-------|-------|
|                                    | C                                                                                                                                                                                                                                                                                                                                                                               | Mn        | Si         | Cr       | Ni                                   | P         | S              | Mo    | Cu    |
| Grade<br>ER316                     | ≤ 0.08                                                                                                                                                                                                                                                                                                                                                                          | 1.0–2.5   | 0.3 – 0.65 | 18 – 20  | 11 – 14                              | ≤0.03     | ≤0.03          | 2 – 3 | ≤0.75 |
| Type                               | Spool    (MIG)                                                                                                                                                                                                                                                                                                                                                                  |           |            |          | Tube    (TIG)                        |           |                |       |       |
| Specification<br>( MM )            | 0.8、 0.9、 1.0、 1.2、 1.6、 2.0                                                                                                                                                                                                                                                                                                                                                    |           |            |          | 1.6、 2.0、 2.4、 3.2、 4.0、 5.0         |           |                |       |       |
| Package                            | S100/1kg                      S200/5kg<br>S270,S300/15kg-20kg                                                                                                                                                                                                                                                                                                                   |           |            |          | 5kg/box                              | 10kg/box  | length :1000MM |       |       |
| Mechanical<br>Properties           | Tensile Strength    Mpa                                                                                                                                                                                                                                                                                                                                                         |           |            |          | Elongation after fracture    A ( % ) |           |                |       |       |
|                                    | ≥ 520                                                                                                                                                                                                                                                                                                                                                                           |           |            |          | ≥ 30                                 |           |                |       |       |
| Diameter<br>(MM)                   | 0.8                                                                                                                                                                                                                                                                                                                                                                             | 1.0       | 1.2        | 1.6      | 2.0                                  | 2.5       | 3.2            |       |       |
| Current    ( A )                   | 70 ~ 150                                                                                                                                                                                                                                                                                                                                                                        | 100 ~ 200 | 140 ~ 220  | 50 ~ 100 | 100 ~ 200                            | 200 ~ 300 | 300 ~ 400      |       |       |
| Application                        | ER316 is also referred to as 2H08Cr19Ni12MoSi stainless steel welding wire.                                                                                                                                                                                                                                                                                                     |           |            |          |                                      |           |                |       |       |
|                                    | The weld metal is an austenite structure containing 19Cr - 12Ni - 2Mo . The corrosion resistance , heat resistance and crack resistance are good . The corrosion resistance of Mo to acetic acid , sulfurous acid , phosphoric acid and salt is good , especially against the pitting corrosion of chloride ions .                                                              |           |            |          |                                      |           |                |       |       |
|                                    | It is mainly used in the chemical industry and power engineering structure, such as    AIS316、SUS316、 C18Cr-12Ni-2.5Mo （SUS316） steel. Stable arc, beautiful welding pass; It can also be used for welding high chromium steel and dissimilar steel without heat treatment after welding.                                                                                       |           |            |          |                                      |           |                |       |       |
| Notice                             | 1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.                                         |           |            |          |                                      |           |                |       |       |
|                                    | 2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1~3 mm; Length of the tungsten pole is about 3~5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area . |           |            |          |                                      |           |                |       |       |
|                                    | 3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.                                                                                                                                                                                                         |           |            |          |                                      |           |                |       |       |
|                                    | 4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.                                                                                                                                      |           |            |          |                                      |           |                |       |       |

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