



# TIG F57

Old reference: TIG 70S6

## Classification

AWS A5.18 : ER70S-6

ISO 636-A : W 46 2 3Si1

## Description & Applications

Copper coated TIG rod to weld low alloyed standard construction / boiler steels like S235-S355, P235-P355 and S255N-S420N. Especially used for root passes.

**Main applications:** Piping systems, tanks, boilers, general metal constructions subjected to specific quality controls.

**Base material:**

**Construction steels for general use, Tube steels, Ship steels:**

| EN          | Ship steels     | ASTM                  |
|-------------|-----------------|-----------------------|
| S185 – S355 | Quality A and B | A285 grade C          |
| P235 – P355 |                 | A442 grade 55, 60     |
| L210 – L360 |                 | A414 grade C, D, E, F |
|             |                 | A515 grade 55, 60, 65 |

## Typical Chemical Composition ( % )

|      | C    | Si   | Mn   | Cr   | Ni   | Mo   | Cu   | Al    | Ti+Zr | V     | P     | S     |
|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| Min  | 0.06 | 0.80 | 1.40 |      |      |      |      |       |       |       |       |       |
| Max  | 0.14 | 1.00 | 1.60 | 0.15 | 0.15 | 0.15 | 0.35 | 0.02  | 0.15  | 0.03  | 0.025 | 0.025 |
| Type | 0.07 | 0.85 | 1.45 | 0.04 | 0.04 | 0.01 | 0.15 | 0.001 | 0.004 | 0.001 | 0.02  | 0.02  |

## All Weld Metal Mechanical Properties

|      | R <sub>e</sub> ( MPa ) | R <sub>m</sub> ( MPa ) | A <sub>5</sub> ( % ) | KV ( J )       |
|------|------------------------|------------------------|----------------------|----------------|
| Min  | 460                    | 530                    | 22                   | -30°C          |
| Max  |                        | 680                    |                      | >27            |
| Type | 480                    | 560                    | 28                   | -20°C<br>-30°C |
|      |                        |                        |                      | 90<br>70       |

## Welding Current & Instructions

| Welding mode | Shielding Gas  |
|--------------|--|
| TIG<br>= -   | ISO 14175:<br>I1 (Ar) 6-12 l/min<br>Back shielding : I1 (Ar) / N1 (Nitrogen) 3-6 l/min |

FT En-TA05-191107

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