



DATA SHEET
DS 113
Rev. 6 dd 15/05/2015
INETIG 80 Ni 2

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CLASSIFICATION

| AWS SPECIFICATIONS | EN SPECIFICATIONS |
|---------------------------|---------------------|
| AWS A 5.28: ER80S-Ni2 | EN ISO 636-A: W2Ni2 |
| AWS A 5.28M: ER55S-Ni2 | |
| ASME SFA 5.28: ER80S-Ni2 | |
| ASME SFA 5.28M: ER55S-Ni2 | |

APPROVALS

| | | |
|--|--|--|
| | | |
| | | |
| | | |

ALLOY TYPE

2.5Ni for good low temperature toughness.

APPLICATIONS

Low alloy copper-coated tig rod designed for welding low alloy steels with 2% Ni content, fine grained for low temperature applications. Suitable for the construction of offshore platforms, tanks and pipelines, where good fracture toughness from as-welded joints is demanded down to temperatures in the region of -60°C.

MATERIALS TO BE WELDED

| ASTM | | EN | | Others |
|-------------------|------------|--------------|--------------------|--------|
| A 203 Gr A, B | API 5 LX65 | 10025 S355 | 10113-3 S420 | |
| A 333 Gr 6 | | 10208-2 L360 | 10028-4 11MnNi 5-3 | |
| A 350 Gr LF1, LF2 | | 10208-2 L415 | 10028-4 13MnNi 6-3 | |
| A 352 Gr LC2 | | 10208-2 L455 | 10028-4 15NiMn 6 | |
| API 5LX52 | | 10113-2 S355 | 10222-3 13MnNi 6-3 | |
| API 5LX56 | | 10113-2 S420 | 10222-3 15NiMn 6 | |
| API 5LX60 | | 10113-3 S355 | | |

WELDING GUIDELINES

Preheat and interpass temperature 150°C. PWHT at 620°C for an hour.

TECHNICAL INFORMATION

Gas: Argon 100% (EN ISO 14175)
 Welding position: all positions



WELDING PARAMETERS

| Current | DC - Straight polarity |
|---------|------------------------|
|---------|------------------------|

PACKAGING DATA

| Diameter (mm) | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | 4.0 |
|---------------|---------|---------|---------|---------|---------|---------|
| Length (mm) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Carton | 5/25 Kg | 5/25 Kg | 5/25 Kg | 5/25 Kg | 5/25 Kg | 5/25 Kg |

* tolerances according to EN ISO 544 specification.



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TYPICAL CHEMICAL COMPOSITION OF WIRE

| C % | Mn % | Si % | S % | P % | Cu % | Ni % | Cr % | Mo % | |
|------|------|------|-------|-------|------|------|------|------|--|
| 0.10 | 1.00 | 0.55 | 0.010 | 0.010 | 0.12 | 2.30 | - | - | |

TYPICAL MECHANICAL PROPERTIES

| GAS | | Yield strength | Tensile strength | Elongation on % 5d | Impact energy (Charpy V) | | | | |
|-----|------------|----------------|------------------|--------------------|--------------------------|---------|---------|---------|---------|
| | | Rs | Rm | A 5d | + 20°C | 0°C | -20°C | -40°C | -60°C |
| | | (MPa) | (MPa) | % | (Joule) | (Joule) | (Joule) | (Joule) | (Joule) |
| I1 | as welded | 520 | 580 | 25 | - | - | 150 | 100 | 80 |
| I1 | after PWHT | 480 | 570 | 27 | - | - | - | 110 | 90 |

PRODUCTS AVAILABLE

| Process | Product | Classification AWS | Classification EN |
|-----------------------|--|--|---|
| MIG/MAG Solid wire | INEFIL 80 Ni 2 | AWS A 5.28: ER80S-Ni2 | EN 14341-A: G 2Ni2 |
| TIG Rods | | | |
| SAW Submerged arc | INESUB S2Ni2 | AWS A 5.23: ENi2 | EN 14171-A: S2Ni2 |
| FCAW Cored wire | INETUB R81T1-Ni2 INETUB M81TG-Ni2 INETUB B81T5-Ni2 | AWS A 5.29: E81T1-Ni2 AWS A 5.28: E80C-Ni2 AWS A 5.29: E81T5-Ni2 | EN 17632-A: T 2Ni EN 17632-A: T 2Ni EN 17632-A: T 2Ni |
| SMAW Electrodes | INE C1 | AWS A 5.5: E8018-C1 | EN 2560-A: 2Ni |