

## 25.35.4CNb

TIG (GTAW)

## TIG WIRES FOR MATCHING HP40NB ALLOYS

## PRODUCT DESCRIPTION

Solid wire for TIG welding.

## CLASSIFICATIONS

There are no national specifications for this wire.

## ASME IX QUALIFICATION

QW432 F-No --

QW442 A-No --

## CHEMICAL COMPOSITION (WELD METAL WT %)

|         | C    | Mn  | Si  | S     | P    | Cr   | Ni   | Mo   | Nb   | Ti   | Zr   | Cu  | Sn    | Pb    |
|---------|------|-----|-----|-------|------|------|------|------|------|------|------|-----|-------|-------|
| min.    | 0.40 | 1.0 | 0.5 | --    | --   | 23.0 | 32.0 | --   | 0.75 | 0.05 | 0.01 | --  | --    | --    |
| max.    | 0.50 | 2.5 | 1.6 | 0.02  | 0.02 | 27.0 | 36.0 | 0.50 | 1.50 | 0.25 | 0.15 | 0.5 | --    | --    |
| Typical | 0.43 | 1.7 | 1.1 | 0.005 | 0.01 | 26   | 35   | <0.3 | 1.1  | 0.1  | 0.03 | 0.1 | <0.01 | <0.01 |

## ALL-WELD MECHANICAL PROPERTIES

| As welded                 | Min. * | Typical |
|---------------------------|--------|---------|
| Tensile strength (MPa)    | 450    | 760     |
| 0.2% proof strength (MPa) | 250    | 515     |
| Elongation (%) 4d         | 5      | 12      |
| 5d                        | --     | 13      |
| Reduction of area (%)     | --     | 11      |
| Hardness cap/mid (HV)     | --     | 211/263 |

\* Minimum tensile properties based on wrought alloy 800H.

Room temperature elongation has little significance for weld metal designed for high temperature service and creep resistance. Values down to 4.5% (on 4d) are allowed in ASTM HP40 castings and the ductility of multipass welds may approach this value due to carbide precipitation in successive runs.

## TYPICAL OPERATING PARAMETERS

| Shielding gas | Current | Diameter (mm) | Parameters |
|---------------|---------|---------------|------------|
| Argon         | DC-     | 2.4           | 100A, 12V  |

## PACKAGING DATA

| Diameter (mm) | Weight (kg) | Packaging | Item number  |
|---------------|-------------|-----------|--------------|
| 1.6           | 2.5         | PE TUBE   | T25354CNB-16 |
| 2.0           | 2.5         | PE TUBE   | T25354CNB-20 |
| 2.4           | 2.5         | PE TUBE   | T25354CNB-24 |
| 3.2           | 2.5         | PE TUBE   | T25354CNB-32 |

HIGH TEMPERATURE ALLOYS