



## Material - ASME SA-29 1018

### Standard Specification for Hot Rolled Medium and High Tensile Structural Steel

Group - Ferrous Mild Steel Alloy

Sub Group - ASME SA-29 1018 Hot Rolled Medium and High Tensile Structural Steel

Application - Intended for Valve, Pump, General Engineering, Construction and Other Industries

Grade Belongs to the Industry - Steel, Plate, Wire, Rod, Tube and Forging

| Chemical Composition    |      |                | Heat Treatment    |  |
|-------------------------|------|----------------|-------------------|--|
| Carbon                  | C %  | 0.150 - 0.200  | Quench and Temper |  |
| Silicon                 | Si % | 0.100 - 0.200  |                   |  |
| Manganese               | Mn % | 0.600 - 0.900  |                   |  |
| Phosphorus              | P %  | 0.040 max.     |                   |  |
| Sulphur                 | S %  | 0.050 max.     |                   |  |
| Boron                   | B %  | 0.0005 – 0.003 |                   |  |
| Iron                    | Fe % | Balance        |                   |  |
| -                       | -    | -              |                   |  |
| -                       | -    | -              |                   |  |
| -                       | -    | -              |                   |  |
| Mechanical Properties   |      |                |                   |  |
| Tensile Strength in Mpa |      | 380 - 690      |                   |  |
| Yield Strength in Mpa   |      | 220 min.       |                   |  |
| Elongation in %         |      | 13 min.        |                   |  |
| Reduction of Area in %  |      | 35 min.        |                   |  |
| Hardness in BHN         |      | 241 max.       |                   |  |
| Impact in Joule         |      | -              |                   |  |

| Cross Reference Table |          |         |   |
|-----------------------|----------|---------|---|
| Material              | Standard | Country | Grade Belong to the Industry              |
| 2062 E 350            | IS       | India   | Steel, Plate, Wire, Rod, Tube and Forging |
| 1018                  | SAE      | USA     | Steel, Plate, Wire, Rod, Tube and Forging |
| 1018                  | AISI     | USA     | Steel, Plate, Wire, Rod, Tube and Forging |
| A 830 G10180          | ASTM     | USA     | Steel, Plate, Wire, Rod, Tube and Forging |
| G10180                | UNS      | USA     | Steel, Bar, Wire, Rod, Tube and Forging   |
| SA-311 1018 Class A   | ASME     | USA     | Steel, Plate, Wire, Rod, Tube and Forging |
| SA-513 1018           | ASME     | USA     | Steel, Plate, Wire, Rod, Tube and Forging |

**Further any inquiry to discuss with Gravity Cast Pvt. Ltd. – Gravity Group of Companies team member Call on +918469160029, or email [marketing@gravitycastindia.com](mailto:marketing@gravitycastindia.com)**

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