

# Material: EN 1.8830

## Standard Specification for Fine Grain Structural Steel

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** EN 1.8830 Fine Grain Structural Steel

**Application:** Intended for Valve, Pump, General Engineering, Automotive and Other Industries

**Grade Belongs to the Industry:** Steel

| Chemical Composition |      |               |
|----------------------|------|---------------|
| Carbon               | C %  | 0.140 max.    |
| Silicon              | Si % | 0.550 max.    |
| Manganese            | Mn % | 1.650 max.    |
| Phosphorus           | P %  | 0.020 max.    |
| Sulphur              | S %  | 0.010 max.    |
| Nitrogen             | N %  | 0.010 max.    |
| Nickel               | Ni % | 0.070 max.    |
| Molybdenum           | Mo % | 0.250 max.    |
| Vanadium             | V %  | 0.080 max.    |
| Niobium              | Nb % | 0.050 max.    |
| Titanium             | Ti % | 0.025 max.    |
| Aluminium            | Al % | 0.015 - 0.055 |
| Iron                 | Fe % | Balance       |
| -                    | -    | -             |
| -                    | -    | -             |

| Heat Treatment                                    |
|---|
| Annealing or Normalizing or Hardening + Tempering |

| Mechanical Properties   |           |
|-------------------------|-----------|
| Tensile Strength in Mpa | 480 - 660 |
| Yield Strength in Mpa   | 380 min.  |
| Elongation in %         | 19 min.   |
| Reduction of Area in %  | -         |
| Hardness in BHN         | -         |
| Impact in Joule         | -         |

| Cross Reference Table |          |           |                               |
|-----------------------|----------|-----------|-------------------------------|
| Material              | Standard | Country   | Grade Belong to the Industry  |
| AISI 4020             | AISI     | USA       | Forging, Bar, Wire, and Shape |
| 1.8866                | DIN      | Germany   | Steel                         |
| C450L0                | AS       | Australia | Steel                         |
| P355Q                 | AFNOR NF | France    | Steel                         |
| P355QH                | UNI      | Italy     | Steel                         |
| C450                  | AS       | Australia | Steel                         |
| A732 6N               | ASTM     | USA       | Casting                       |

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