

## Material: DIN 1.0484

### Standard Specification for Steel Pipes for Pipelines for Combustible Fluids; Pipes of Requirements Class B

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** DIN 1.0484 Steel Pipes for Pipelines for Combustible Fluids; Pipes of Requirements Class B

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

**Grade Belongs to the Industry:** Pipes

| Chemical Composition |      |               | Heat Treatment                                                                                                                                                                                                                              |  |
|----------------------|------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Carbon               | C %  | 0.170 max.    | Annealing or Normalizing or Hardening + Tempering                                                                                                                                                                                           |  |
| Silicon              | Si % | 0.400 max.    |                                                                                                                                                                                                                                             |  |
| Manganese            | Mn % | 1.200 max.    |                                                                                                                                                                                                                                             |  |
| Phosphorus           | P %  | 0.025 max.    |                                                                                                                                                                                                                                             |  |
| Sulphur              | S %  | 0.020 max.    |                                                                                                                                                                                                                                             |  |
| Chromium             | Cr % | 0.300 max.    |                                                                                                                                                                                                                                             |  |
| Nickel               | Ni % | 0.300 max.    |                                                                                                                                                                                                                                             |  |
| Molybdenum           | Mo % | 0.100 max.    | <b>Mechanical Properties</b><br>Tensile Strength in Mpa      415 - 760<br>Yield Strength in Mpa      290 - 440<br>Elongation in %      21 min.<br>Reduction of Area in %      -<br>Hardness in BHN      -<br>Impact in Joule      40 J @ RT |  |
| Copper               | Cu % | 0.300 max.    |                                                                                                                                                                                                                                             |  |
| Nitrogen             | N %  | 0.012 max.    |                                                                                                                                                                                                                                             |  |
| Aluminium            | Al % | 0.015 - 0.060 |                                                                                                                                                                                                                                             |  |
| Niobium              | Nb % | 0.050 max.    |                                                                                                                                                                                                                                             |  |
| Vanadium             | V %  | 0.050 max.    |                                                                                                                                                                                                                                             |  |
| Titanium             | Ti % | 0.040 max.    |                                                                                                                                                                                                                                             |  |
| Iron                 | Fe % | Balance       |                                                                                                                                                                                                                                             |  |

| Cross Reference Table |          |                |                              |
|-----------------------|----------|----------------|------------------------------|
| Material              | Standard | Country        | Grade Belong to the Industry |
| 1.0457                | EN       | European Union | Pipes                        |
| J13005                | UNS      | USA            | Casting                      |
| 13030                 | CSN      | Czech Republic | Steel                        |
| 20MB5                 | AFNOR NF | France         | Cold Rolled, Strip           |
| 230 - 450 W           | JIS      | Japan          | Casting                      |
| 3                     | AS       | Australia      | Hot Rolled Bar               |
| A487 2A               | ASTM     | USA            | Casting                      |

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**Customer Care:** +91-99090 45075 Email: [info@icastllp.com](mailto:info@icastllp.com)