



**GRAVITY CAST PVT. LTD.**  
**GRAVITY GROUP OF COMPANIES**

## Material - ASTM A356 10

**Standard Specification for Steel Castings, Carbon, Low Alloy, and Stainless Steel, Heavy-Walled for Steam Turbines**

**Group - Ferrous Mild Steel Alloys**

**Sub Group - ASTM A356 / A356M Carbon, Low Alloy, and Stainless Steel, Heavy-Walled for Steam Turbines**

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

**Grade Belongs to the Industry - Casting**

| Chemical Composition |      |               | Heat Treatment                                    |          |
|----------------------|------|---------------|---|----------|
| Carbon               | C %  | 0.200 max.    | Normalising or Annealing or Hardening + Tempering |          |
| Silicon              | Si % | 0.600 max.    |   |          |
| Manganese            | Mn % | 0.500 - 0.800 |   |          |
| Phosphorus           | P %  | 0.035 max.    |   |          |
| Sulphur              | S %  | 0.030 max.    |   |          |
| Chromium             | Cr % | 2.000 - 2.750 |   |          |
| Molybdenum           | Mo % | 0.900 - 1.200 |   |          |
| Iron                 | Fe % | Balance       |   |          |
| -                    | -    | -             | Mechanical Properties                             |          |
| -                    | -    | -             | Tensile Strength in Mpa                           | 585 min. |
| -                    | -    | -             | Yield Strength in Mpa                             | 380 min. |
| -                    | -    | -             | Elongation in %                                   | 20 min.  |
| -                    | -    | -             | Reduction of Area in %                            | 35 min.  |
| -                    | -    | -             | Hardness in BHN                                   | -        |
| -                    | -    | -             | Impact in Joule                                   | -        |

| Cross Reference Table |          |                |                              |
|-----------------------|----------|----------------|------------------------------|
| Material              | Standard | Country        | Grade Belong to the Industry |
| J22090                | UNS      | USA            | Casting                      |
| 1.7375                | DIN      | Germany        | Tube                         |
| 1.7380                | EN       | European Union | Bar, Plate and Forging       |
| 10CD 9-10             | AFNOR NF | France         | Plate                        |
| 10 CrMo 10            | STAS     | Romania        | Tube                         |
| 10CrMo9-10            | MSZ      | Hungary        | Bar, Tube and Forging        |
| 10CrMo9-10            | BS       | British        | Steel                        |

**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)**

All information in our data sheets and website is indicative only and is not intended to be a substitute for the full specification from which it is extracted. It is intended to provide typical values to allow comparison between metal alloy option rather than a definitive statement of mechanical performance or suitability for a particular application as these will vary with temperature, product type and product application. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of business.

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