

# Material: ASTM B 564 N06686

## Standard Specification for Nickel Alloy Forgings

**Group:** Non-Ferrous Nickel Alloys

**Sub Group:** ASTM B 564 N06686 Nickel Alloy Forgings

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

**Grade Belongs to the Industry:** Forging

| Chemical Composition |      |                 | Heat Treatment                       |          |
|----------------------|------|-----------------|--------------------------------------|----------|
| Carbon               | C %  | 0.010 max.      | As-Cast or Annealing or Age Hardning |          |
| Silicon              | Si % | 0.080 max.      |                                      |          |
| Manganese            | Mn % | 0.750 max.      |                                      |          |
| Chromium             | Cr % | 19.000 - 23.000 |                                      |          |
| Sulphur              | S %  | 0.020 max.      |                                      |          |
| Molybdenum           | Mo % | 15.000 - 17.000 |                                      |          |
| Phosphorus           | P %  | 0.040 max.      |                                      |          |
| Titanium             | Ti % | 0.020 - 0.250   |                                      |          |
| Iron                 | Fe % | 5.000 max.      |                                      |          |
| Tungsten             | W %  | 3.000 - 4.400   |                                      |          |
| Nickel               | Ni % | Balance         | Mechanical Properties                |          |
| -                    | -    | -               | Tensile Strength in Mpa              | 690 min. |
| -                    | -    | -               | Yield Strength in Mpa                | 310 min. |
| -                    | -    | -               | Elongation in %                      | 45 min.  |
| -                    | -    | -               | Reduction of Area in %               | -        |
| -                    | -    | -               | Hardness in BHN                      | -        |
| -                    | -    | -               | Impact in Joule                      | -        |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| B 163 N06686          | ASTM     | USA     | Tube                         |
| B 462 N06686          | ASTM     | USA     | Pipe and Valve               |
| B 574 N06686 Grade 1  | ASTM     | USA     | Rod                          |
| B 575 N06686          | ASTM     | USA     | Plate, Sheet and Strip       |
| B 619 N06686          | ASTM     | USA     | Pipe                         |
| B 622 N06686          | ASTM     | USA     | Pipe and Tube                |
| B 626 N06686          | ASTM     | USA     | Tube                         |

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