



## Material - ASTM B 619 N06686

### Standard Specification for Nickel and Nickel-Cobalt Alloy Pipe

Group - Non-Ferrous Nickel Alloys

Sub Group - ASTM B 619 N06686 Nickel and Nickel-Cobalt Alloy Pipe

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

Grade Belongs to the Industry - Pipe

| Chemical Composition |      |                 | Heat Treatment  |  |
|----------------------|------|-----------------|---|--|
| Carbon               | C %  | 0.010 max.      | As-Cast or Annealing or Age Hardning  |  |
| Silicon              | Si % | 0.800 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         | <b>Mechanical Properties</b><br>Tensile Strength in Mpa      690 min.<br>Yield Strength in Mpa      310 min.<br>Elongation in %      45 min.<br>Reduction of Area in %      -<br>Hardness in BHN      -<br>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 564 N06686          | ASTM     | USA     | Forging                      |
| B 574 N06686 Grade 1  | ASTM     | USA     | Rod                          |
| B 575 N06686          | ASTM     | USA     | Plate, Sheet and Strip       |
| B 622 N06686          | ASTM     | USA     | Pipe and Tube                |
| B 626 N06686          | ASTM     | USA     | Tube                         |

**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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