

## Material - ASTM B 163 N06690

### Standard Specification for Seamless Nickel and Nickel Alloy Condenser and Heat-Exchanger Tube

Group - Non-Ferrous Nickel Alloys

Sub Group - ASTM B 163 N06690 Seamless Nickel and Nickel Alloy Condenser and Heat-Exchanger Tube

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

Grade Belongs to the Industry - Tube

| Chemical Composition |      |                 | Heat Treatment                       |           |
|----------------------|------|-----------------|--------------------------------------|-----------|
| Carbon               | C %  | 0.050 max.      | As-Cast or Annealing or Age Hardning |           |
| Silicon              | Si % | 0.500 max.      |                                      |           |
| Manganese            | Mn % | 0.500 max.      |                                      |           |
| Copper               | Cu % | 0.500 max.      |                                      |           |
| Sulphur              | S %  | 0.015 max.      |                                      |           |
| Chromium             | Cr % | 27.000 - 31.000 |                                      |           |
| Iron                 | Fe % | 7.000 - 11.000  |                                      |           |
| Nickel               | Ni % | 58.000 min.     |                                      |           |
| -                    | -    | -               | Mechanical Properties                |           |
| -                    | -    | -               | Tensile Strength in Mpa              | 586 - 793 |
| -                    | -    | -               | Yield Strength in Mpa                | 241 - 448 |
| -                    | -    | -               | Elongation in %                      | 4 min.    |
| -                    | -    | -               | Reduction of Area in %               | -         |
| -                    | -    | -               | Hardness in HRC                      | 19 - 98   |
| -                    | -    | -               | Impact in Joule                      | -         |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| B 166 N06690          | ASTM     | USA     | Rod, Bar and Wire            |
| B 167 N06690          | ASTM     | USA     | Pipe and Tube                |
| B 168 N06690          | ASTM     | USA     | Plate, Sheet and Strip       |
| B 564 N06690          | ASTM     | USA     | Forging                      |
| B 834 N06690          | ASTM     | USA     | Pipe                         |
| N06690                | UNS      | USA     | Sheet                        |
| SB-166 N06690         | ASME     | USA     | Rod, Bar and Wire            |

For any further inquiries, please do not hesitate to contact us. You may visit our website at [AMTECH TECHNOCAST PVT. LTD.](http://AMTECH TECHNOCAST PVT. LTD.), call us at [+91 9879817994](tel:+919879817994), or email us at [manish@amtechtechnocast.com](mailto:manish@amtechtechnocast.com)

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