

## Material - ASTM B 163 N08810

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

Group - Non-Ferrous Nickel Alloys

Sub Group - ASTM B 163 N08810 Seamless Nickel and Nickel Alloy Condenser and Heat-Exchanger Tubes

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 - 0.100   | As-Cast or Annealing or Age Hardning |          |
| Silicon              | Si % | 1.000 max.      |                                      |          |
| Manganese            | Mn % | 1.500 max.      |                                      |          |
| Copper               | Cu % | 0.750 max.      |                                      |          |
| Sulphur              | S %  | 0.015 max.      |                                      |          |
| Chromium             | Cr % | 19.000 - 23.000 |                                      |          |
| Aluminium            | Al % | 0.150 - 0.600   |                                      |          |
| Titanium             | Ti % | 0.150 - 0.600   |                                      |          |
| Iron                 | Fe % | 39.500 max.     | Mechanical Properties                |          |
| Nickel               | Ni % | 30.000 - 35.000 | Tensile Strength in Mpa              | 448 min. |
| -                    | -    | -               | Yield Strength in Mpa                | 172 min. |
| -                    | -    | -               | Elongation in %                      | 30 min.  |
| -                    | -    | -               | Reduction of Area in %               | -        |
| -                    | -    | -               | Hardness in BHN                      | -        |
| -                    | -    | -               | Impact in Joule                      | -        |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| B 407 N08810          | ASTM     | USA     | Pipe and Tube                |
| B 408 N08810          | ASTM     | USA     | Rod and Bar                  |
| B 409 N08810          | ASTM     | USA     | Plate, Sheet and Strip       |
| B 564 N08810          | ASTM     | USA     | Forging                      |
| SB-163 N08810         | ASME     | USA     | Tube                         |
| N08810                | UNS      | USA     | Tube                         |
| -                     | -        | -       | -                            |

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)

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.