

## Material: ASTM A240 UNS S38815

### Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

**Group:** Ferrous Stainless Steel Alloys

**Sub Group:** ASTM A240 Chromium and Chromium-Nickel Stainless Steel for Pressure Vessels and for General Applications

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

**Belongs to the Industry:** Steel, Plate, Sheet and Strip

| Chemical Composition |      |                 | Heat Treatment          |          |
|----------------------|------|-----------------|-------------------------|----------|
| Carbon               | C %  | 0.030 max.      | Solution Annealing      |          |
| Silicon              | Si % | 5.500 - 6.500   |                         |          |
| Manganese            | Mn % | 2.000 max.      |                         |          |
| Phosphorus           | P %  | 0.040 max.      |                         |          |
| Sulphur              | S %  | 0.020 max.      |                         |          |
| Chromium             | Cr % | 13.000 - 15.000 |                         |          |
| Nickel               | Ni % | 13.000 - 17.000 |                         |          |
| Molybdenum           | Mo % | 0.750 - 1.500   |                         |          |
| Copper               | Cu % | 0.750 - 1.500   |                         |          |
| Aluminium            | Al % | 0.300 max.      |                         |          |
| Iron                 | Fe % | Balance         |                         |          |
| -                    | -    | -               |                         |          |
| -                    | -    | -               |                         |          |
| -                    | -    | -               |                         |          |
| -                    | -    | -               |                         |          |
|                      |      |                 | Mechanical Properties   |          |
|                      |      |                 | Tensile Strength in Mpa | 540 min. |
|                      |      |                 | Yield Strength in Mpa   | 255 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 |
| S38815                | UNS      | USA     | Steel                        |
| A403 WP S38815        | ASTM     | USA     | Steel and Pipe               |
| A959 S38815           | ASTM     | USA     | Steel                        |
| SA-240 S38815         | ASME     | USA     | Steel                        |
| SA-249 S38815         | ASME     | USA     | Steel                        |
| SA-312 S38815         | ASME     | USA     | Steel                        |
| SA-479 S38815         | ASME     | USA     | Steel                        |

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