

## Material: ASTM A 790 S39274

### 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 A 790 S39274 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 and Pipe

| Chemical Composition |      |                 | Heat Treatment          |          |
|----------------------|------|-----------------|-------------------------|----------|
| Carbon               | C %  | 0.030 max.      | Solution Annealing      |          |
| Silicon              | Si % | 0.800 max.      |                         |          |
| Manganese            | Mn % | 1.000 max.      |                         |          |
| Phosphorus           | P %  | 0.030 max.      |                         |          |
| Sulphur              | S %  | 0.020 max.      |                         |          |
| Chromium             | Cr % | 24.000 - 26.000 |                         |          |
| Nickel               | Ni % | 6.000 - 8.000   |                         |          |
| Molybdenum           | Mo % | 2.500 - 3.500   |                         |          |
| Nitrogen             | N %  | 0.240 - 0.320   |                         |          |
| Copper               | Cu % | 0.200 - 0.800   |                         |          |
| Tungsten             | W %  | 1.500 - 2.500   | Mechanical Properties   |          |
| Iron                 | Fe % | Balance         |                         |          |
| -                    | -    | -               |                         |          |
| -                    | -    | -               |                         |          |
| -                    | -    | -               |                         |          |
| -                    | -    | -               |                         |          |
|                      |      |                 | Tensile Strength in Mpa | 800 min. |
|                      |      |                 | Yield Strength in Mpa   | 550 min. |
|                      |      |                 | Elongation in %         | 15 min.  |
|                      |      |                 | Reduction of Area in %  | -        |
|                      |      |                 | Hardness in HB          | 310 max. |
|                      |      |                 | Impact in Joule         | -        |

| Cross Reference Table |          |         |                               |
|-----------------------|----------|---------|-------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry  |
| A240 UNS S39274       | ASTM     | USA     | Steel, Plate, Sheet and Strip |
| S39274                | UNS      | USA     | Steel                         |
| A789 S39274           | ASTM     | USA     | Steel and Tube                |
| A815 S39274           | ASTM     | USA     | Steel and Pipe                |
| A959 S39274           | ASTM     | USA     | Steel and Pipe                |
| A988 S39274           | ASTM     | USA     | Steel                         |
| SA-789 UNS S39274     | ASME     | USA     | Steel                         |

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