

## Material: ASTM A 959 Type 434

### 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 959 Type 434 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

| Chemical Composition |      |                 | Heat Treatment                     |            |
|----------------------|------|-----------------|------------------------------------|------------|
| Carbon               | C %  | 0.120 max.      | Annealing or Hardening + Tempering |            |
| Silicon              | Si % | 1.000 max.      |                                    |            |
| Manganese            | Mn % | 1.000 max.      |                                    |            |
| Phosphorus           | P %  | 0.040 max.      |                                    |            |
| Sulphur              | S %  | 0.030 max.      |                                    |            |
| Chromium             | Cr % | 16.000 - 18.000 |                                    |            |
| Molybdenum           | Mo % | 0.750 - 1.250   |                                    |            |
| Iron                 | Fe % | Balance         |                                    |            |
| -                    | -    | -               | Mechanical Properties              |            |
| -                    | -    | -               | Tensile Strength in Mpa            | 413.7 min. |
| -                    | -    | -               | Yield Strength in Mpa              | 206.8 min. |
| -                    | -    | -               | Elongation in %                    | -          |
| -                    | -    | -               | Reduction of Area in %             | -          |
| -                    | -    | -               | Hardness in BHN                    | -          |
| -                    | -    | -               | Impact in Joule                    | -          |

| Cross Reference Table |          |         |                               |
|-----------------------|----------|---------|-------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry  |
| A240 UNS S43400       | ASTM     | USA     | Steel, Plate, Sheet and Strip |
| S43400                | UNS      | USA     | Steel                         |
| 434 S 20              | BS       | British | Steel and Wire                |
| 51434                 | SAE      | USA     | Steel                         |
| A651 TP 434           | ASTM     | USA     | Steel and Tube                |
| STS 434               | KS       | Korea   | Steel, Wire and Rod           |
| SUS 434               | JIS      | Japan   | Steel, Wire and Rod           |

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