



## Material - ASTM A 580 S31277

### Standard Specification for Stainless Steel Wire

Group - Non-Ferrous Nickel Alloys

Sub Group - ASTM A 580 S31277 Stainless Steel Wire

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

Grade Belongs to the Industry - Wire

| Chemical Composition |      |                 | Heat Treatment                                                                                                                                                                                                                |  |
|----------------------|------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Carbon               | C %  | 0.020 max.      | As-Cast or Annealing or Age Hardning                                                                                                                                                                                          |  |
| Silicon              | Si % | 0.500 max.      |                                                                                                                                                                                                                               |  |
| Manganese            | Mn % | 3.000 max.      |                                                                                                                                                                                                                               |  |
| Chromium             | Cr % | 20.500 - 23.000 |                                                                                                                                                                                                                               |  |
| Molybdenum           | Mo % | 6.500 - 8.000   |                                                                                                                                                                                                                               |  |
| Copper               | Cu % | 0.500 - 1.500   |                                                                                                                                                                                                                               |  |
| Nitrogen             | N %  | 0.300 - 0.400   |                                                                                                                                                                                                                               |  |
| Phosphorus           | P %  | 0.030 max.      |                                                                                                                                                                                                                               |  |
| Sulphur              | S %  | 0.010 max.      |                                                                                                                                                                                                                               |  |
| Nickel               | Ni % | 26.000 - 28.000 |                                                                                                                                                                                                                               |  |
| -                    | -    | -               | <b>Mechanical Properties</b><br>Tensile Strength in Mpa      1620 min.<br>Yield Strength in Mpa      1345 min.<br>Elongation in %      -<br>Reduction of Area in %      -<br>Hardness in BHN      -<br>Impact in Joule      - |  |
| -                    | -    | -               |                                                                                                                                                                                                                               |  |
| -                    | -    | -               |                                                                                                                                                                                                                               |  |
| -                    | -    | -               |                                                                                                                                                                                                                               |  |
| -                    | -    | -               |                                                                                                                                                                                                                               |  |
| -                    | -    | -               |                                                                                                                                                                                                                               |  |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| Incoloy 27-7MO        | Gravity  | India   | Sheet, Plate, Bar and Wire   |
| A 213 S31277          | ASTM     | USA     | Tube                         |
| A 240 S31277          | ASTM     | USA     | Plate, Sheet and Strip       |
| A 249 S31277          | ASTM     | USA     | Tube                         |
| A 312 S31277          | ASTM     | USA     | Pipe                         |
| A 959 S31277          | ASTM     | USA     | Pipe                         |
| SA-213 S31277         | ASME     | USA     | Tube                         |

**Further any inquiry to discuss with Gravity Cast Pvt. Ltd. – Gravity Group of Companies team member Call on +918469160029, or email [marketing@gravitycastindia.com](mailto:marketing@gravitycastindia.com)**

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