Aesteiron continues to expand its product line in UNS S32900 to meet the emerging customer needs, and whereas Aesteiron Steels Pvt. Ltd. is ISO 9001:2008 Certified, ASPL has a great Projects in this grade in all parts of the world with renowned suppliers presenting the wide range of services. We pride ourselves in the quality of our products, our competitive pricing and our exceptional customer service. We have been recognized for our outstanding customer service in satisfaction surveys of top-ranked mills in India and all over the world. ASPL, with iron and steel as its main business, manufactures premium steel products with high technologies and a high added value and fosters three major product categories, namely carbon steel, stainless steel and special steel. Through our worldwide marketing network, these premium products not only satisfy the demand on the domestic market but are also exported to more than forty countries and regions in Asia, Africa, Europe and America, extensively applied to various. We strive and stand committed to maintain this respectable position by catering to the requirements of our customers in the best possible way leaving no room for complaints.

**Introduction:**

**Products Available**

**Chemical Composition**

<table>
<thead>
<tr>
<th></th>
<th>TYPE 329</th>
<th>WNR 1.4460</th>
<th>UNS S32900</th>
<th>AISI 329</th>
<th>GRADE 329H</th>
<th>AFNOR Z2 CND 27.05Az</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>0.08max</td>
<td>0.08max</td>
<td>0.08max</td>
<td>0.08max</td>
<td>0.08max</td>
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<tr>
<td>Iron</td>
<td>Bal</td>
<td>Bal</td>
<td>Bal</td>
<td>Bal</td>
<td>0.08max</td>
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<tr>
<td>Manganese</td>
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<td>1.0max</td>
<td>1.0max</td>
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<tr>
<td>Silicon</td>
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<tr>
<td>Sulphur</td>
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<td>0.03max</td>
<td>0.03max</td>
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<tr>
<td>Phosphorus</td>
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<td>0.04max</td>
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<tr>
<td>Chromium</td>
<td>23.0-28.0</td>
<td>23.0-28.0</td>
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<td>23.0-28.0</td>
<td>23.0-28.0</td>
<td>23.0-28.0</td>
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<tr>
<td>Nickel</td>
<td>2.5-5.0</td>
<td>2.5-5.0</td>
<td>2.5-5.0</td>
<td>2.5-5.0</td>
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</tr>
<tr>
<td>Molybdenum</td>
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</table>

**Mechanical Properties**

<table>
<thead>
<tr>
<th></th>
<th>TYPE 329</th>
<th>WNR 1.4460</th>
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<th>GRADE 329H</th>
<th>AFNOR Z2 CND 27.05Az</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength (Mpa) psi, min</td>
<td>725(10500)</td>
<td>725(10500)</td>
<td>725(10500)</td>
<td>725(10500)</td>
<td>725(10500)</td>
<td>725(10500)</td>
</tr>
<tr>
<td>0.2% Yield Strength (Mpa) psi, min</td>
<td>550(79800)</td>
<td>550(79800)</td>
<td>550(79800)</td>
<td>550(79800)</td>
<td>550(79800)</td>
<td>550(79800)</td>
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<tr>
<td>Elongation in 2&quot; %</td>
<td>25min</td>
<td>25min</td>
<td>25min</td>
<td>25min</td>
<td>25min</td>
<td>25min</td>
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<tr>
<td>Reduction in Area, %</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Hardness, Brinell</td>
<td>230</td>
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</tr>
</tbody>
</table>

**Standard Available**

- ASTM A240 / ASME SA240
- ASTM A268 / ASME SA268
- ASTM A789 / ASME SA789
- ASTM A790 / ASME SA790
- ASTM A511 / ASME SA511

- DUPLEX STAINLESS STEEL - SS 329, UNS S32900 Plates
- DUPLEX STAINLESS STEEL - SS 329, UNS S32900 Pipes
- DUPLEX STAINLESS STEEL - SS 329, UNS S32900 Round Bar
- DUPLEX STAINLESS STEEL - SS 329, UNS S32900 Tube
- DUPLEX STAINLESS STEEL - SS 329, UNS S32900 Flanges
- DUPLEX STAINLESS STEEL - SS 329, UNS S32900 Wire
- DUPLEX STAINLESS STEEL - SS 329, UNS S32900 Fittings
Applications:

• Heat exchangers
• Chemical tanks
• Refineries
• Shafts (Marine) pressure vessel parts
• Flanges, Fittings & Pipes for the Oil and Gas Industries
• Offshore Technology
• Paper Industry
• Compressor parts
• Seawater desalination plants

Features

• One of the most widely used precipitation hardening grades in the business.
• While soft and ductile in the solution annealed condition, it is capable of high properties with a single precipitation or aging treatment.
• Characterized by good corrosion resistance, high harness, toughness and strength.

Machinability

• Long, gummy chips characterize this alloy's machinability.
• It can be machined in the annealed condition, however condition H1150M will yield best results.
• Post machining solution treatment of parts will be required prior to final hardening if machining in this condition.

Heat Treatment

• CONDITION A--Soak at 1900 F (1038 C) for 30 minutes and cool below 60 F (16 C) for complete martensite transformation.
• CONDITION H 950- Treat Condition A material at 900 F(482 C) for 1 hour, air cool..
• CONDITION H925, H1025, H1075, H1100, H1150- Soak solution treated material for 4 hours at specified temperature, air cool,
• CONDITION H1150M- Soak solution treated material at 1400 F (760 C) for 2 hours, air cool, then re-heat to 1150 F (620 C) for 4 hours and air cool.

Welding

• Successfully welded by common fusion and resistance methods, this alloy should not be joined by oxyacetylene welding.
• AWS E/ER630 filler metal is recommended if required.

Forging

• Soak for 1 hour at 2150 F (1177 C) prior to forging.
• Do not work below 1850 F (1010 C).
• Post-work solution treatment is required prior to final hardening.