<table>
<thead>
<tr>
<th>Stainless Steel Grades</th>
<th>Austenitic</th>
<th>Ferritic</th>
<th>Duplex</th>
<th>Martensitic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Magnetic</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Magnetic</td>
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</tr>
</tbody>
</table>

**Martensitic Super Ferrites**
- Add more nickel
- Austenitic structure

**Conventional Ferrites**
- Add nickel
- Austenitic

**Utility Ferrites**
- Add carbon
- Ferritic

**Lean Duplex**
- Mixed ferrite - austenitic crystal structure (duplex)
- Higher levels of Cr and lower levels of Ni as compared to the austenitic grades. Contain nitrogen.
- High strength and good corrosion resistance.
- Weldable

**Cr Ni (Mo)**
- Austenitic
- Heat resistant
- Generally considered to have poor weldability by heat treatment.
- Carbon levels, therefore cannot be strengthened by heat treatment.

**Mn N Cr Ni**
- Austenitic
- Heat resistant
- With the exception of the utility grades, grades which account for 70% of all stainless steel usage.
- Most common grades which accounts for 70% of all stainless steel usage.

**Plain chromium stainless steels**
- Plain chromium (Cr) + Nickel (Ni) addition
- Iron (Fe) + Chromium (Cr)

**Plain chromium stainless steels, but with low carbon levels, therefore cannot be strengthened by heat treatment**
- Weldable

**Stainless steels**
- Plain chromium stainless steels
- High carbon: 0.2 to 1.2%
- High carbon: 0.12 to 18%

**Add carbon**
- Add more nickel
- Austenitic
- Ferritic
- Duplex
- Martensitic

**Add nickel**
- Austenitic
- Ferritic
- Duplex
- Martensitic

**Mixed ferrite - austenitic crystal structure (duplex)**
- Higher levels of Cr and lower levels of Ni as compared to the austenitic grades. Contain nitrogen.
- High strength and good corrosion resistance.
- Weldable

**Weldable Ni containing stainless steels. Most common grades which accounts for 70% of all stainless steel usage.**
- Excellent corrosion resistance and associated secondary properties.
- Suitable for a wide range of applications.

**Plain chromium stainless steels**
- Plain chromium (Cr) + Nickel (Ni) addition
- Iron (Fe) + Chromium (Cr)

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