Brown McFarlane offers the widest range of carbon and stainless steel plate, available ex-stock.

It holds a complete range of CarElso HIC Premium+ plate tested for its resistance to hydrogen induced cracking (HIC).

**Specifications/Grades**

ASME/ASTM SA/A 516 grades 60/65/70. Normalised.

**Guaranteed Results**

- Crack Length Ratio (CLR) < 5%
- Crack Thickness Ratio (CTR) < 1.5%
- Crack Sensitivity Ratio (CSR) < 0.5%

Tested to NACE TM 0284-03 Solution A

Certification EN10204, 3.2 Lloyds (Available for inspection and approval).

Compatible with the pressure vessel steel specification of all leading oil and gas companies, engineering companies and process licensors.

See the CarElso HIC Premium+ brochure for full details.
Available Sizes

ASME/ASTM SA/A 516 Grades 60/65/70

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Length</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/8/10/13/16/20/25/30/35/40mm</td>
<td>12000mm</td>
<td>2000/2500/3000mm</td>
</tr>
<tr>
<td>45/50mm</td>
<td>9000mm</td>
<td>2500/3000mm</td>
</tr>
<tr>
<td>55/60/65mm</td>
<td>7000mm</td>
<td>2000/2500mm</td>
</tr>
<tr>
<td>70/75/80mm</td>
<td>7000mm</td>
<td>2000/2500mm</td>
</tr>
<tr>
<td>90-105mm</td>
<td>6000mm</td>
<td>3000mm</td>
</tr>
</tbody>
</table>

Chemical Analysis
Max Ceq 0.41% ≤ 50mm, 0.43% > 50mm
Max S 0.001%, P 0.008%, Nb 0.015%, V 0.005%, O 0.002%

All material is made with an Electric Arc Furnace, fully killed, vacuum degassed, with fine grain.

Mechanical Properties
Mechanical and HIC tests after simulated PWHT at 610°C (2 min/mm).
Ambient tensile properties as per standard.
Charpy impact test longitudinal and transverse direction
- At -51°C for thickness <= 25mm [20J average /16J individual]
- At -46°C for thickness >25mm [41J average /34J individual]

NDT
Ultrasonic testing control as per SA 578 level C with +75mm pitch scanning and +100mm² max defect area.

General Supply Conditions
Normalized 920°C. The material surface is shot blasted to SA 2.5, with low-stress die stamping at two locations: head and foot of plate. In addition, material has identification paint markings on one end and shipping marks. Plates have continuous brand marked on the two long edges.

Additional Testing
We are able to offer supplementary testing to meet particular oil company specifications; this will be carried out by an independent test laboratory.

Processing
- High Definition Plasma: 16m x 4m
- Oxy/Propane: 50m x 6m
- Plate Rolling / Dished Ends