Clifton Clif-Clad® wear plate is a bimetallic product consisting of a mild steel base plate that is overlaid with a high chrome/high carbon composite. This composite contains 30% chrome and 5% carbon that forms the chromium carbide particles that make the surface extremely hard and resistant to wear and impact. The overlay layer has a metallurgical bond with the base plate that will not separate or corrode and is resistant to high heat.

Clifton Clif-Clad® plate is ideal for extreme wear applications and environments with high temperatures and corrosive problems. Clif-Clad® provides the ultimate level of resistance to impact and wear.

**Choose Clifton Clif-Clad® for your toughest wear problems.**

<table>
<thead>
<tr>
<th>Typical Chemical Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon 5%</td>
</tr>
<tr>
<td>Chrome 30%</td>
</tr>
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<table>
<thead>
<tr>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardness 600 BHN</td>
</tr>
<tr>
<td>Thickness from 5/16”</td>
</tr>
<tr>
<td>Width 96”</td>
</tr>
<tr>
<td>Length 144”</td>
</tr>
<tr>
<td>Maximum Overlay Thickness up to 1/2”</td>
</tr>
<tr>
<td>Nominal Thickness up to 1-1/4”</td>
</tr>
<tr>
<td>Base Plate Available in A36, A514, &amp; 304 Stainless Steel</td>
</tr>
<tr>
<td>Available in Plating &amp; Tubing</td>
</tr>
</tbody>
</table>

**Applications**

- Fan Blades
- Blast Furnace Bells
- Sinter Plants
- Cement Kilns
- Hoppers
- Chutes
- Truck Bed Liners
- Side Wear Pads for Shovels and Loaders
- Bucket Heal Plates
- Longwall Pans
- Muller Bottom Plates
- Fan Blades
- Fan Housing
HARDNESS
The combination of high chrome and high carbon creates hard chromium carbide crystals that reach 600 BHN.

IMPACT STRENGTH
The mild steel base plate acts as a cushion to absorb impact. Clifton Clif-Clad® can withstand severe impact from falling materials. While the hard overlay surface may crack, a strong, deep weld bond to the base material will prevent the overlay from separating, shearing or shaling from the base plate under impact.

CUTTING
Clifton Clif-Clad® can be cut with plasma, laser, oxy fuel and water jet.

MACHINING
The overlay surface is not machinable. However, Clifton Steel can provide Clif-Clad® plating with bevels, countersink, counterbore, and tapped holes. Consult a Clifton Steel representative.

FORMING
Clif-Clad® can be cold formed or rolled. The recommended radius should be greater than 20 times the thickness of the plate.

WELDING
Clif-Clad® can be welded on the mild steel base plate surface using standard carbon steel electrodes such as 7018.

<table>
<thead>
<tr>
<th>FASTENING METHODS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PLUG WELD MOUNTING</td>
<td>Holes can be cut into the plate for plug welding the base material to a supporting structure. Plug weld hole is then filled in with hardfacing to maintain a hard surface.</td>
</tr>
<tr>
<td>STUD WELD FASTENERS</td>
<td>A steel stud can be welded to the mild steel back plate vertical to the plate back. The stud can then be used to fasten the overlay plate to a supporting structure.</td>
</tr>
<tr>
<td>COUNTERSINK FASTENERS</td>
<td>Countersink holes can be put into the overlay plates for bolting to a supporting structure. The insert can then be filled with hardfacing for extra protection from wear.</td>
</tr>
<tr>
<td>EDGE OR BACKSIDE WELDING</td>
<td>Welding to the back plate, which is composed of mild steel, requires no special procedures. Weld joints exposed to wear can be capped with a hardface.</td>
</tr>
</tbody>
</table>

CONTACT A CLIFTON STEEL REPRESENTATIVE TODAY

OTHER CLIFTON STEEL PRODUCTS

WEAR AND IMPACT STEEL
- Clif-Clad®
- Econalloy AR 250
- Tensalloy AR 400
- Tensalloy AR 450
- Tensalloy Blue AR 500
- Tensalloy Extra HY 80
- Tensamang 11-14% Hadfield Manganese Steel Plate

HIGH STRENGTH STEEL
- A514
- A572, Grade 50
- A656, Grade 80
- 100X

ROUND BARS
- Econalloy 1045
- Tensalloy 4150

MILITARY
- Steel Armor Plate
- Aluminum Armor Plate

SPECIALTY AND EXOTIC METALS
- Aircraft Alloys
- Nitronic 40, 50, 60
- Aluminum
- Stainless Steel
- Hastelloy
- Stainless Steel: 300 & 400 series
- Inconel
- 17-4 & 17-5
- Manganese
- Tantalum
- Maraging Steels
- Titanium
- Molybdenum
- Tungsten
- Monel
- Waspalo
- Nickel Alloy
- Alloy 600, 625, 718, X-750 Hastelloy

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