



CLIFTON CLIF-CLAD® CHROMIUM CARBIDE OVERLAY PLATE

Clifton Steel 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 up to 32% chrome and up to 5.8% 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.

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.

TYPICAL CHEMICAL COMPOSITION

CARBON	4.2 - 5.8%
CHROME	28.0 - 32.0%

AVAILABILITY

HARDNESS	600+ BHN
THICKNESS	FROM 5/16"
WIDTH	TO 96"
LENGTH	TO 120"
MAX OVERLAY THICKNESS	UP TO 1/2"
NOMINAL THICKNESS	UP TO 1-1/4"
BASE PLATE AVAILABLE IN	A36, A514 & 304 STAINLESS STEEL
AVAILABLE IN	PLATING & TUBING
Don't see what you need? We specialize in custom sizes.	



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

WE SPECIALIZE IN FABRICATING PARTS TO CUSTOMERS PRINTS



CLIF-CLAD®

HARDNESS

The combination of high chrome and high carbon creates hard chromium carbide crystals that well exceeds 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 spalling from the base plate under impact.

CUTTING

Plasma cutting is the required method for Clif-Clad®.

MACHINING

The overlay surface can be Blanchard ground. We can also 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 in conjunction with our Tensaweld Workmate welding wire.

FASTENING METHODS

PLUG WELD MOUNTING	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.
STUD WELD FASTENERS	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.
COUNTERSINK FASTENERS	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.
EDGE OR BACKSIDE WELDING	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.

OTHER CLIFTON STEEL PRODUCTS

WEAR & 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 A656, Grade 80
100X A572, Grade 50

ROUND BARS

Econalloy 1045
Tensalloy 4150

MILITARY

Steel Armor Plate
Aluminum Armor Plate

PIPES

Induction Hardened Wear Pipe
Clif-Clad® Overlay Pipe
Cast Lined Pipe

WELD WIRE

Workmate
Ultra-100
Ultra-200
Ultra-300
Mang-312
Nickel-90

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