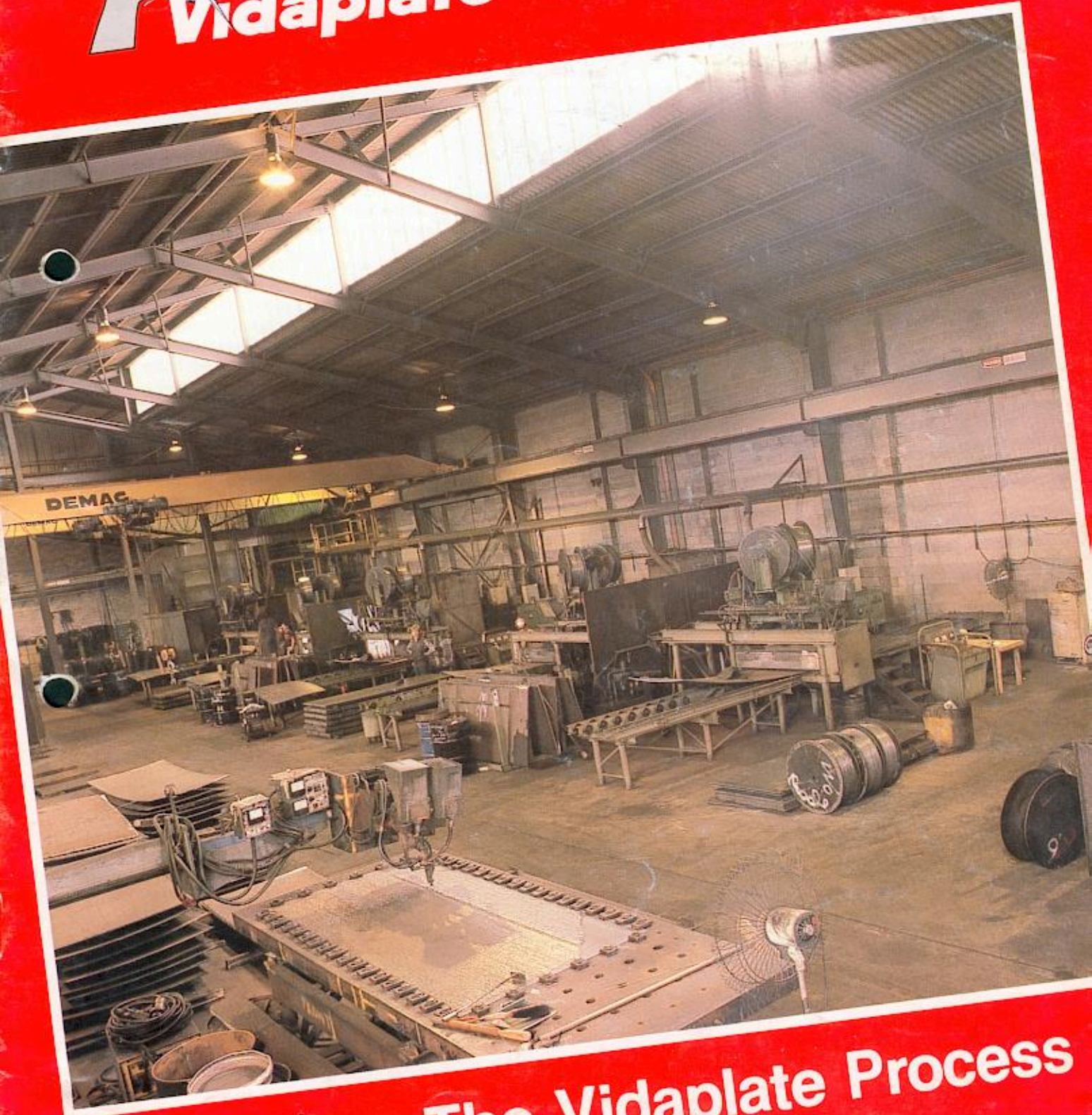




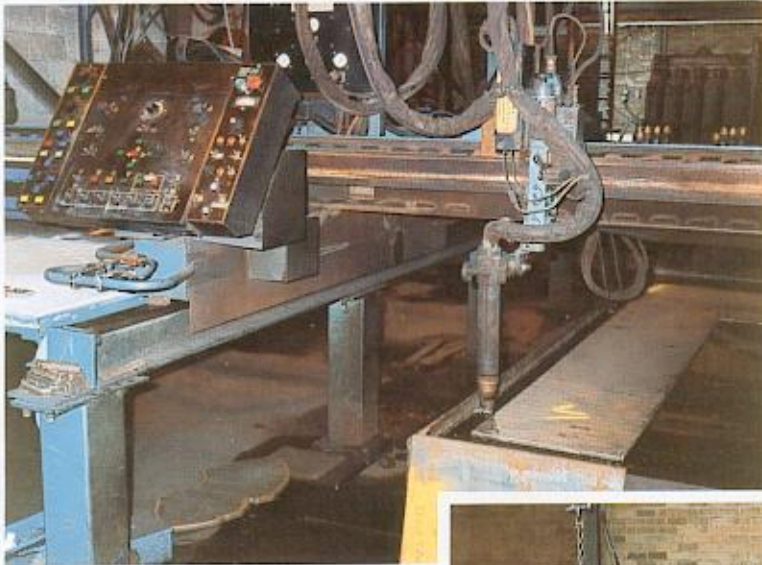
# PRODUCTS & APPLICATIONS



A general view of part of a Vidaplate manufacturing plant.

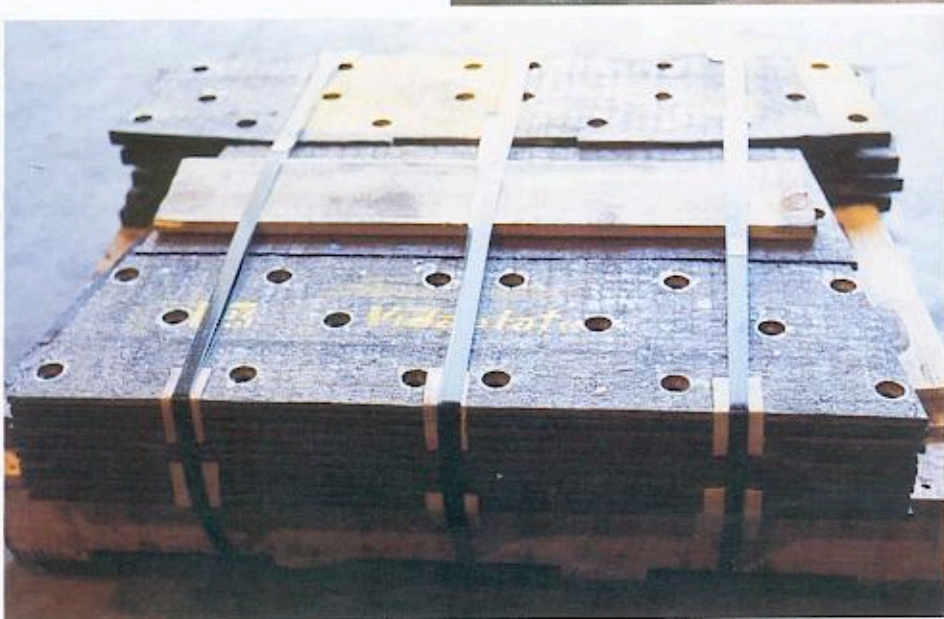
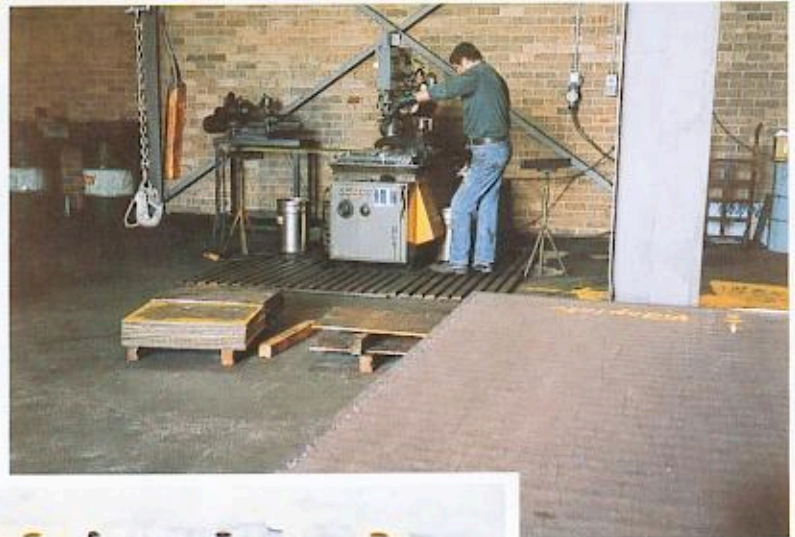
# The Vidaplate Process

*Vidaplate stacked ready for shipment as full plates.*



*N.C. Plasma cutting equipment used in cutting Vidaplate to customer requirements.*

*Metal disintegrators are used to drill and countersink holes in the chromiumum carbide clad plate.*



*A number of plates drilled and stacked ready for delivery.*



# Vidaplate®

## VIDAPLATE WEAR PLATE

Severe abrasion resistance.

### DESCRIPTION

Vidaplate is manufactured by a unique patented process developed in Australia by which a heavy layer of highly wear resistant carbide is deposited to a mild steel base.

Very hard carbides are suspended in a tough wear resistant matrix.

The bond between the mild steel base and the overlay is of a very high strength.

It will resist repeated and prolonged impact loads and the overlay deposit offers unequalled resistance to low or high stress abrasion and heat of up to 450°C V23 grade to 800°C (see back page).

### APPEARANCE

The wear resisting side of Vidaplate appears as 65 mm smooth wide weld bands.

These bands are fused together to form an essentially flat even continuous surface.

Due to the hard characteristics of the carbide layer and the contraction stresses during the manufacturing welding process, cracks develop at the right angles to the surface but do not penetrate beyond the carbide layer.

MINIMUM BEND RADIUS:  
Hardface outside – 1000 mm  
Hardface inside – 100 mm

### CUTTING AND FORMING

Vidaplate is usually cut by plasma arc, but it can be cut with Armalloy 650 gouging/cutting electrodes and carbon arc.

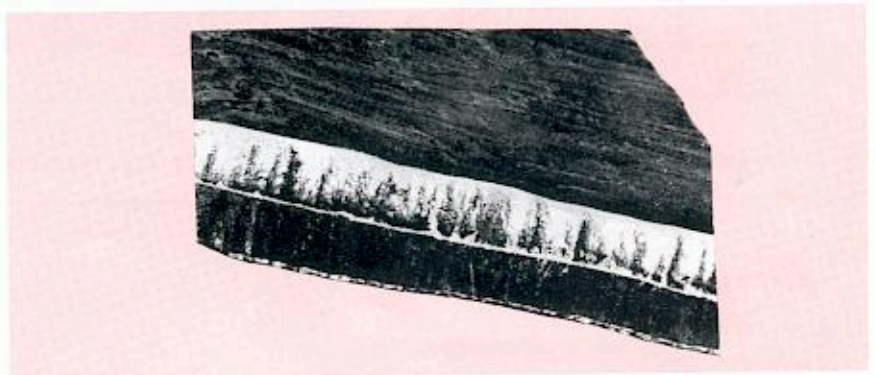
Vidaplate can be cold rolled for large diameters or formed by way of a brake press for smaller diameters.

### FIXING

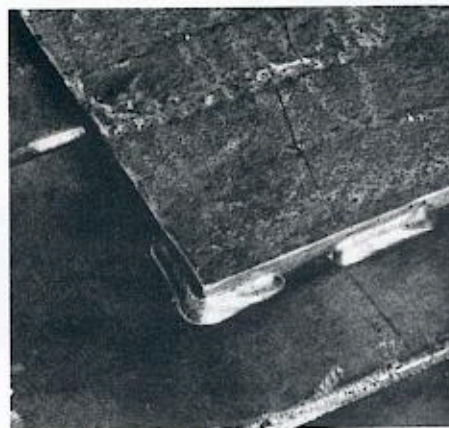
Vidaplate can be welded to an existing metal structure by welding the mild steel base with low hydrogen or stainless steel electrode dependant on the metal structure.

Also available are spark machined countersunk holes or plug weld holes ex. works.

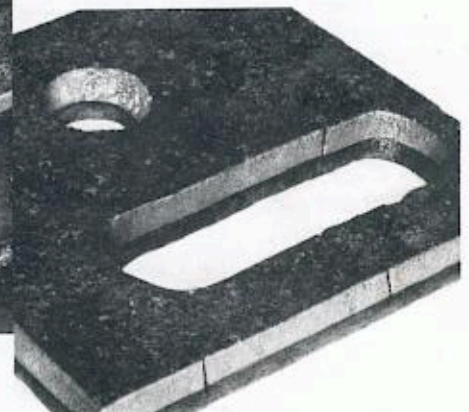
Studs can also be welded to the mild steel base.



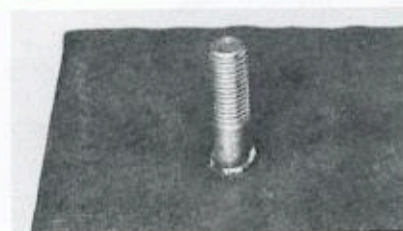
*This sample shows a section of Vidaplate with 9 mm of chrome carbide deposit fused on 10 mm mild steel. The low dilution ratio can be clearly seen.*



*Fixing with Armalloy J200.*



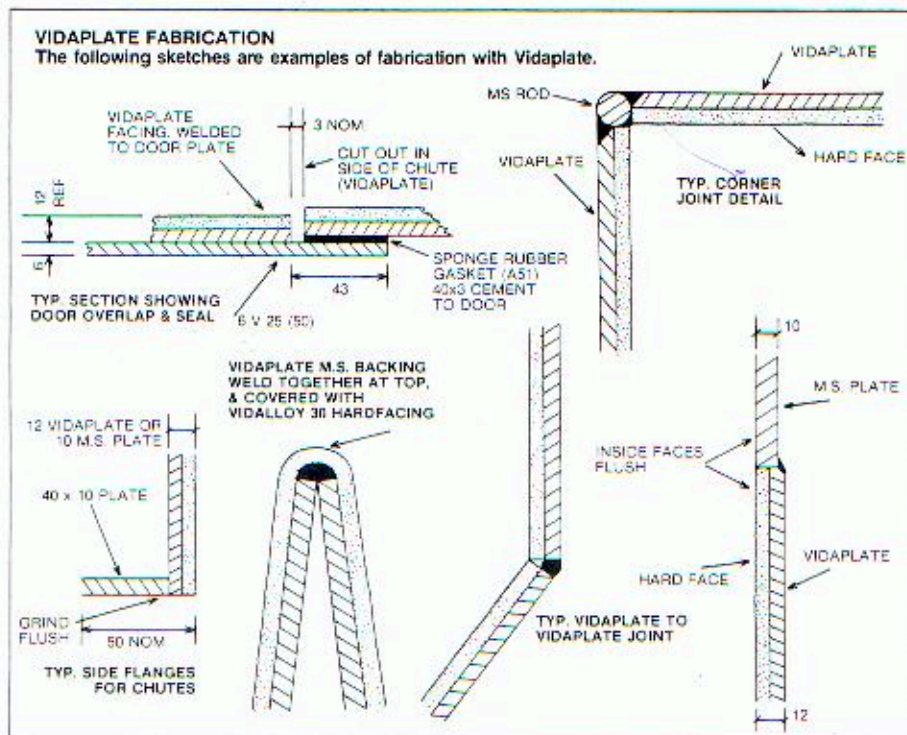
*Top: Precision countersunk hole.  
Bottom: Plug weld hole.*



*Stud welded to mild steel base.*

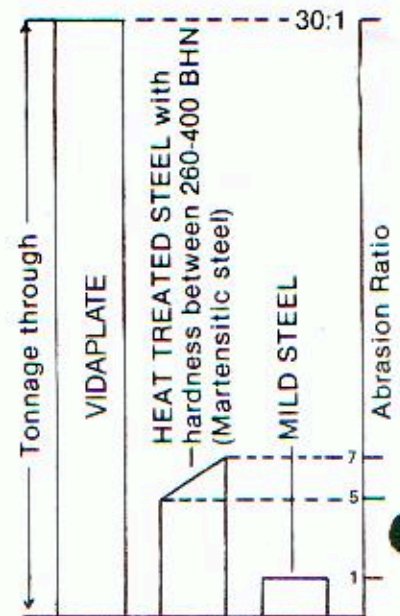
## VIDAPLATE FABRICATION\*

The following sketches are examples of fabrication with Vidaplate.



\*Also available in strips or fabricated sections, direct from distributors.

## WEAR RESISTANT COMPARISON



Vidaplate often outwears mild steel 30:1, Martensitic steel 12:1.

## APPLICATIONS

### MINING:

Dump truck body trays, Ore cars, Dipper shovel lining, Apron feeders, Mine and quarry skips, Deck and skirting plates, Bulldozer mould boards, Ore scrapers, Grizzly bars and side plates, Slurry pipes, Dragline buckets and chains.

### STEEL MILLS:

Bunker liners, Pallet chute liners, Reclaim buckets, Hot discharge chutes, Paul Wurth chutes, Surge cooler wear plates, Sinter Screen decks, Vibratory feeders, Down comer pipes, Travelling hearth, Control gates, Chain guides, Rolling mill guides, Burden liner plates.

### POWER PLANTS:

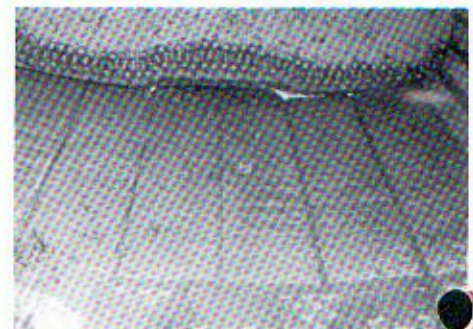
Cyclone blades and housing, Receiving hoppers, Inlet vanes, Screw conveyors, Pipe lines for ash.

### EARTH MOVING:

Bucket teeth, Bulldozer blades, Compact rollers, Scrapers, Ripper teeth and shanks, Loader buckets, Excavator shovels.

### MISCELLANEOUS:

Cultivator tips, Concrete mixers, Clinker chutes, Mixer paddles, Pathways, Suction sweeper blades, Asphalt mixer plants, Spouts and troughs.



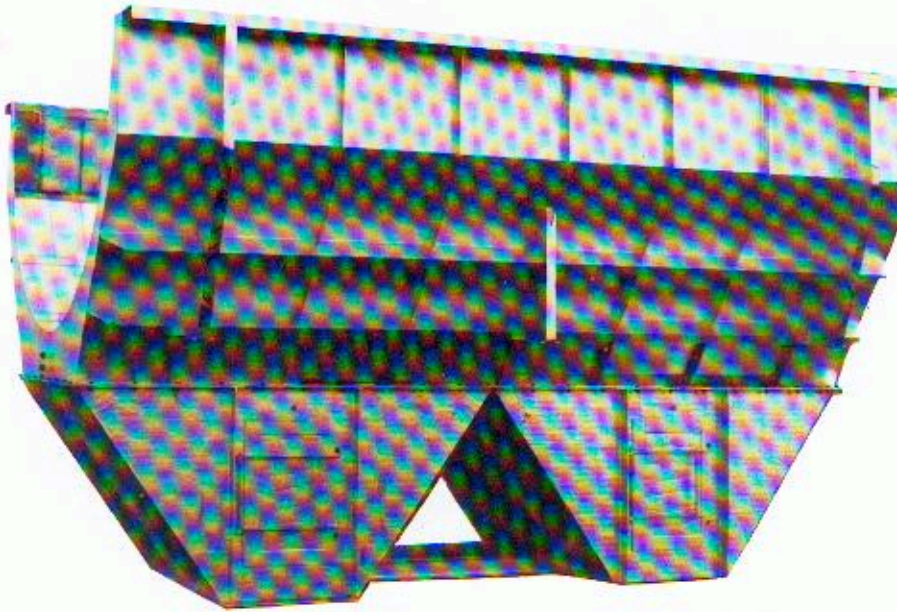
Dipper shovel, lined with Vidaplate strips.



Loader bucket life increased by cladding with Vidaplate.

# VIDAPLATE

## The proven Clad Plate around the world

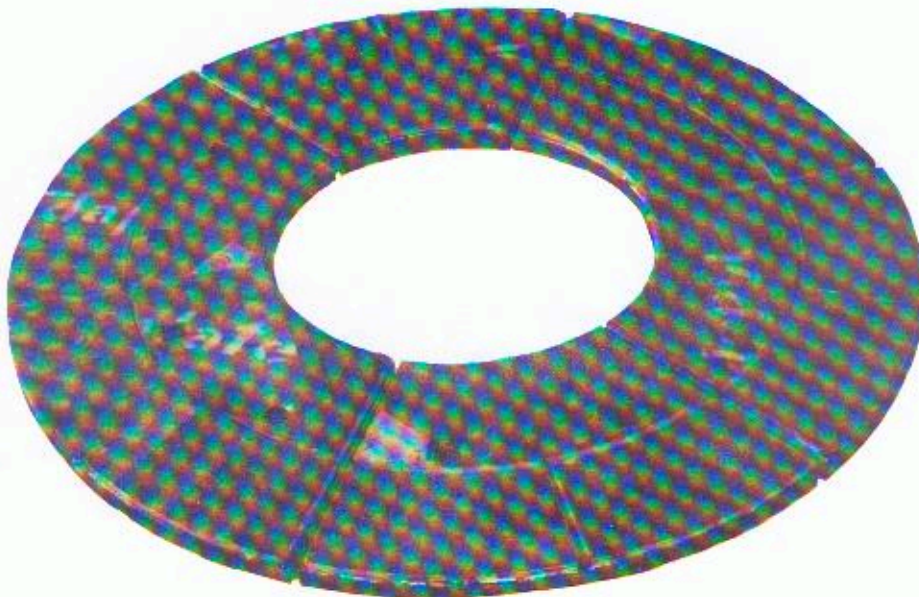
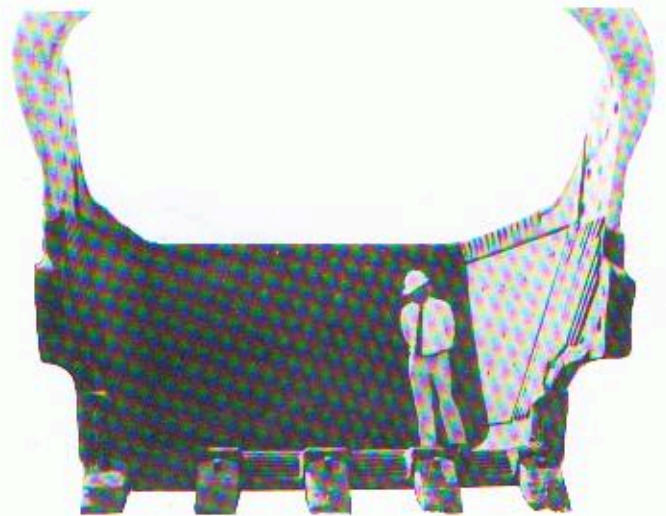


### COAL BINS

In U.K. and Europe  
supplied by  
Vidaplate U.K. Division.

### DRAG LINE BUCKET

in Australia



### PATHWAY

Brick Industry in Australia  
Hardfacing up to  
17 mm thick.

# SIZE AND GRADE SELECTION

## PLATE THICKNESS

THICKNESS			Weight per Square Metre Kg
Hardfacing Overlay	Mild Steel Base	Total	
mm	mm	+ or -1 mm	
4	6	10	81
6	6	12	95
7	8	15	122
7	10	17	132
9	10	19	144
9	12	21	160
12	6	18	140
17	10	27	217
6	25	31	238

\*Standard sheet size: – 2600 mm x 1000 mm

\*Larger sheets: – made to order

\*Vidaplate – supplied to your drawing ready for installation

## PLATE GRADES

GRADE	TYPICAL USE	RELATIVE COST
V23	High stress abrasion at temperature to 800°C. Hardness – 63-65 RC.	6.3
V31	High stress abrasion and heavy impact use up to 450°C. Plate can be rolled to less than 70 mm radius. Hardness – 55-60 RC.	1
V34	Fine particle erosion, extremely tough matrix, Hardness – 62-67 RC.	1.2
V37	Complex nodular chromium carbide. High impact resistance to 550°C. Hardness – 58-62 RC.	1.9

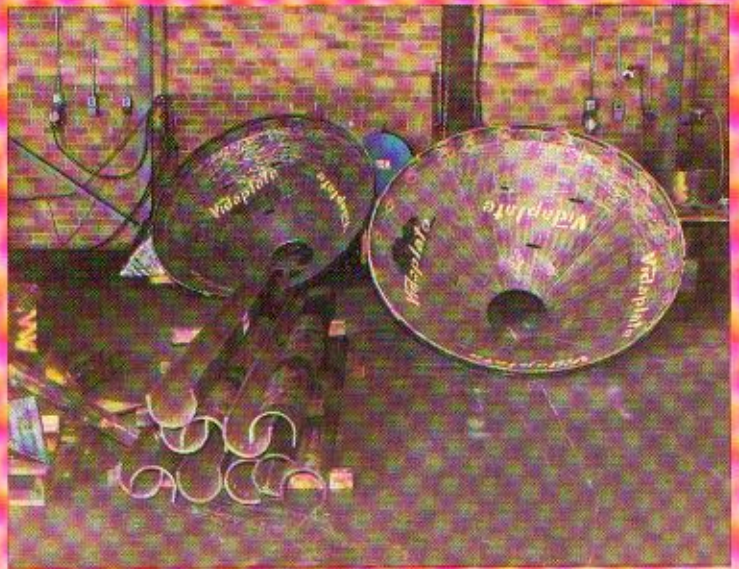
# Vidaplate

A Division of The ANI Corporation Limited  
A.C.N. 000 421 358

170 RAILWAY PDE, BASSENDEAN WA 6054 AUSTRALIA (PO BOX 51)  
DOMESTIC - TEL: (09) 279 5111 FAX: (09) 279 3138  
INTERNATIONAL - TEL: (61 9) 279 5111 FAX: (61 9) 279 3138

### CUTTING

Vidaplate is usually cut with plasma, but can be cut with oxy-arc, carbon arc, friction saw. It will not cut with normal oxy-acetylene without addition of iron powder.



*Vidaplate may be formed to suit particular requirements such as funnel shapes or pipes.*



*Two views of Vidaplate formed as pipe.*



*Apron skirt of large crusher fabricated from Vidaplate.*



*General view of Vidaplate cladding on sides of very large dragline bucket.*

*Another view of Vidaplate cladding to floor of dragline bucket.*





# Vidaplate®

Manufacturers and world wide distributors of chromium carbide wear products for cost effective wear protection to the Sugar Industry



Composite chromium carbide wear products reduce your shredder liner and hammer downtime



Composite chromium carbide anvil wear bars for lower maintenance costs



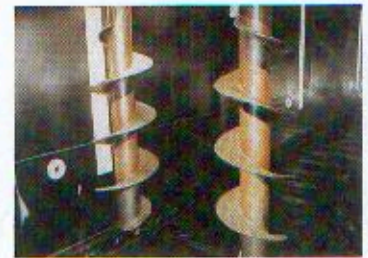
Smooth overlay chromium carbide wear plate for trouble-free pressure feeder chutes



Chromium carbide wear plate adds wear life to static flanges



Chromium carbide wear plate liners on trash plates substantially cut maintenance costs



Screw flights fabricated from chromium carbide wear plate perform well on loosening screws and conveyors



Longer life with fabricated chromium carbide control valve reducers

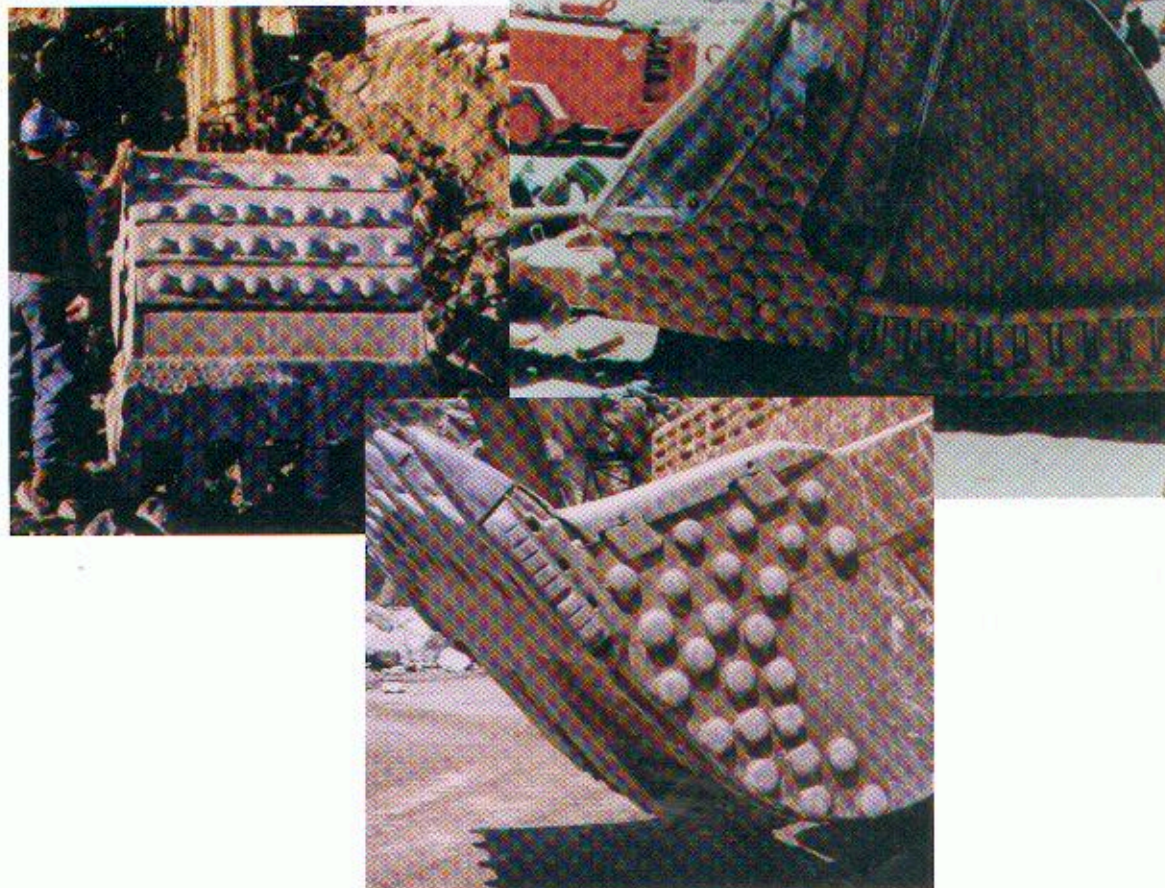


Years of wear with chromium carbide wear plate on the bottom of harvester croplifting shoes

# VidaProduct

U. S. ITEM S. A.

New Product  
and  
Applications  
for  
Cast Product



## VIDABUTTON™

Rate and pattern of wear are dependent upon conditions, material, and machine. Stocked in four sizes Vidabuttons can be matched to meet these challenges to increase machine availability and maximize production.

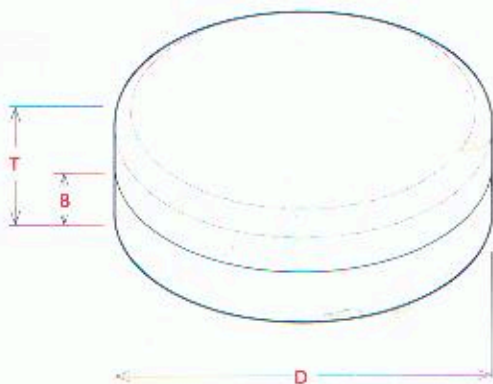
Vidabuttons were created with two proven principles in mind. First, that a circular, domed shape provides maximum protection and security while minimizing the effects of heavy impact. Second, by using a chrome white iron casting, with a minimum hardness of 700 BHN, superior

abrasion resistance is achieved to deliver longer life.

With the use of a special metallurgical bonding process the casting is joined with a steel backing plate. This allows the Vidabutton to be installed onto another surface using standard welding tools and materials. No complicated layout or installation procedures are involved.

Vidabuttons are a creative, effective, low-cost solution to problem wear areas.

## Vidabutton Specifications



### Vidabutton

Part Number	Diameter D		Thickness T		Base Thickness B		Weight	
	inches	mm	inches	mm	inches	mm	lbs.	kg
VID75	3	75	1	24	13/32	10	3	1.4
VID90	3 1/2	90	1 1/4	32	1/2	12	3 1/2	1.6
VID115	4 1/2	115	1 1/4	32	1/2	12	4 3/4	2.2
VID150	6	150	1 5/8	41	5/8	16	10 1/2	4.8

## Vidabutton Welding Procedure

The parent metal surface must be clean and as flat as possible to ensure maximum weld strength of the Vidabutton.

On low alloy surfaces, use E7016 or E7018 rod, or E70T-5 wire.

On manganese surfaces, use E309-16 stainless steel rod.

Do not preheat the Vidabutton.

For best results the Vidabutton should be clamped and tack welded into position prior to welding.

Continuous welding should not be used. A maximum run length of 2.0" to 2.75" (50-70mm) should be used to minimize heat input.

The following preheat instructions refer to the heating of the parent surface only.

Working in temperatures above 40°F (5°C), preheat heavy sections 1.5 in. (40mm) or greater to 200°F (95°C), no post heat required. Do not preheat if welding on manganese surfaces.

Working in temperatures at or below 40°F (5°C), preheat to 350–400°F (175–205°C). Do not preheat if welding on manganese surfaces.

Recommended fillet sizes:

VID75	1 1/32"	(8mm)
VID90	3/8"	(9mm)
VID115	3/8"	(9mm)
VID150	1/2"	(12mm)

Ensure welding does not come closer than 1/16" (2mm) from the joint line between the casting and the backing plate.

## Cast Product Safety



**WARNING**  
Hard Hat  
Required



**CAUTION**  
Gloves  
Required



**CAUTION**  
Safety  
Glasses  
Required



**WARNING**  
Safety Shoes  
Required



**WARNING**  
Welding Arc  
Wear Proper  
Eye Protection

### WARNING:

When performing the work described in these instructions, always work safely and use proper safety equipment to avoid injury. Always wear OSHA approved hard hat, safety glasses, work gloves, and steel-toed shoes. To avoid injury to others, be sure individuals not directly involved with the work are out of the area.