



USED THE WORLD OVER



Guaranteed Wear Solutions

**"The World's Most Wear Resistant
Fused Alloy Steel Plate"**

Wear Solutions for Fixed and Mobile Applications

Abrasion, Impact & Gouging, Erosion,
Temperature Extremes, Material Hang up/Carry Back

Wear Plates
Chutes & Liners
Hoppers & Conveyors
Dump Trucks
Excavators & Shovels

Industries

Resource
Mining
Construction
Manufacturing and Processing



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**NEW SOUTH WALES
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www.alloysteel.net

Email: info@alloysteel.net

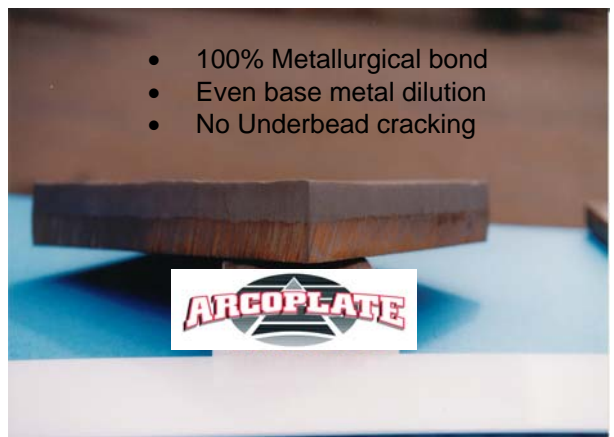




ALLOY STEEL INTERNATIONAL (ASI) is an independent international company with its manufacturing facility and head office in Perth, Western Australia and has been operating for 25 years.

Technical sales Offices: Brisbane, Newcastle.

- ASI is focussed on producing material handling systems that will ultimately maximise our customer's production through reducing costs per tonne of product.
- ASI manufactures specific grades of **ARCOPLATE** for different applications.
- The **ARCOPLATE** product is complemented by our Metallurgical, Engineering & Design Service



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VARIOUS APPLICATIONS



ARCOPLATE DIPPER



ARCOPLATE PIPE SPOOL



ARCOPLATE CYCLONE



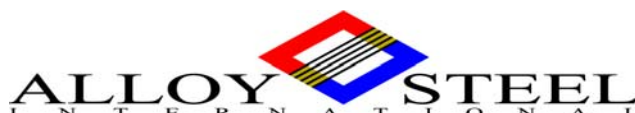
ARCOPLATE HAS A SMOOTH SURFACE CONDITION WITH NO WELD OVERLAY BEADS
Can be ordered with optional polished finish



ARCOPLATE LINER WEAR PLATES



ARCOPLATE WEAR PLATES



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ANTI HANG UP KITS

WITH KIT



DUMP TRUCKS



EARTHMOVING
BUCKETS



BULL DOZERS



LHD
UNDERGROUND
BUCKETS

WITHOUT KIT



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GRADES

Arco Alloy Grade	Abrasion		Impact			High Temp		Anti Hang-up
	M	H	L	M	H	Y/N	°C	
1600		X			X	N		*
800	X			X		N		*
820	X			X		N		*
1040		X		X		Y	500 ⁺	*
8668		X		X		Y	700 ⁺	*

Legend

L – Low, M – Medium, H – High, Y – Yes, N – No

⁺ Cyclic temperatures

STANDARD PLATE SIZE: 610MM X 3080MM

THICKNESSES

Alloy Depth (mm)	Base Plate Depth (mm)
4	7
6	7, 9, 11
8	7, 9, 11
10	9, 11
12	11
16	11
18	11
20	11

THICKER PLATES AVAILABLE ON REQUEST

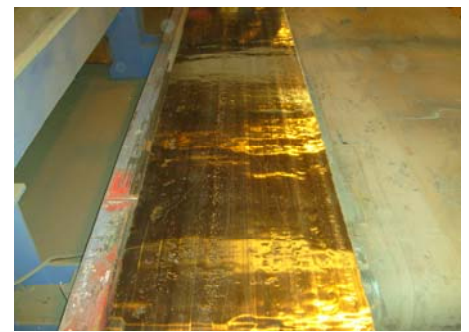
SURFACE FINISH



STANDARD FINISH



POLISHED FINISH



ULTRA FINISH

All Grades of Arcoplate can be polished for anti hang up applications

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the world over

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HARDNESS MISCONCEPTIONS

THE CHEMICAL COMPOSITION, MICROSTRUCTURE AND BULK HARDNESS ARE THE FACTORS THAT INFLUENCE ABRASION RESISTANCE

The Higher the Hardness the Better – False

Greater hardness does not always mean greater abrasion resistance or longer wear life.

Hardness values only become relevant when the comparisons are made within a family of steels.

- i.e. Comparing quenched & tempered plate with other Q&T plate.
An “abrasion resistant” Q&T plate of 500HB will wear better than a 400HB plate, however a 500HB high chromium iron fused alloy steel plate has a substantially better abrasive resistance than a 500HB Q&T plate.

Microstructure Influences Abrasion Resistance – True

When comparing Chromium Carbide Overlay plate the high bulk hardness ratings are not the only factor assuring resistance to wear.

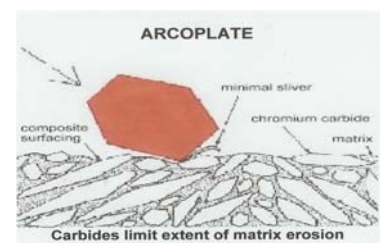
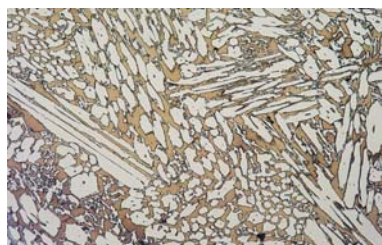
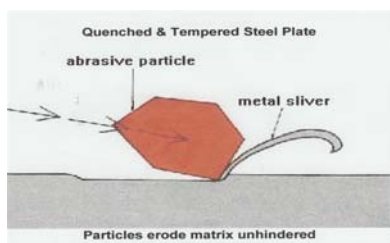
Abrasion resistance depends on a combination of both bulk hardness and the metallurgical microstructure of the alloy.

The alloy with the highest percentage, the most evenly dispersed and the hardest carbides will have the best resistance to abrasion.

ARCOPLATE Solution

The various grades of ARCOPLATE derive their high abrasion resistance from the very hard M_7C_3 carbides (1500 – 1800HV) combined with an average of 60% of carbides dispersed through a softer, tough matrix.

The above is illustrated in the pictorials below:



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FACTS AND BENEFITS

ASI are the manufacturers of ARCOPLATE™, the worlds most wear resistant fused alloy steel plate.

ARCOPLATE™ is a hardfaced wear plate that gives the following benefits:

- | | |
|---|---|
| Manufacturing process is fully computerised: | Uniform hardness (58 – 62 Rc) and microstructure down to fusion line enabling predictable wear rates |
| Smooth Finish: | No weld beads to interrupt material flow thereby eliminating turbulence and accelerated abrasion |
| ARCOPLATE™ can be supplied pre-polished: | Eliminates hang up / carry back on mobile equipment or fixed plant |
| Single Pass Alloy Deposition (6mm to 16mm): | No under bead cracking and spalling as experienced with multi pass layers |
| Thickness Range: | Alloy Depth: 4, 6, 8, 10, 12, 16, 18 & 20 mm
Base Metal Depth: 7, 9 & 11 mm |
| Stressed relieved during manufacture: | Very low residual stresses and able to take severe impact and bending |
| Performance: | Laboratory and field tests show that millimetre for millimetre ARCOPLATE will outlast Quenched & Tempered wear plate by a factor of up to 6 to 1 and conventional welded overly plate by 2 to 1 |
| Non – Directional Wear Plate: | Can be fitted in any direction to material flow |



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