



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

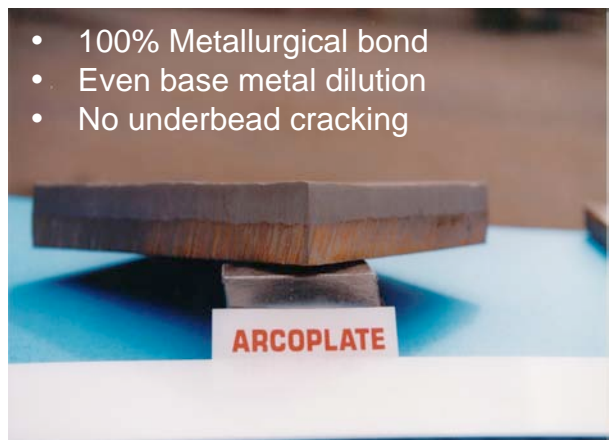
Resource
Mining
Construction
Manufacturing and Processing





Alloy Steel International (ASI) is an independent international company with its manufacturing facility and head office in Perth, Western Australia. For over 25 years ASI has focussed on producing material handling systems that ultimately maximise its customers' production through the reduction of associated costs per tonne of product. As a result, ASI products and services have been adopted across Australia as well as among more than 20 international markets across the globe.

ASI manufactures ARCOPLATE - the world's most wear-resistant fused-alloy steel plate. ARCOPLATE is produced in different grades and thicknesses to suit a variety of different applications. The ARCOPLATE product is complemented by ASI's Metallurgical, Engineering & Design services.



- 100% Metallurgical bond
- Even base metal dilution
- No underbead cracking



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



ANTI HANG-UP KITS

WITH KIT



DUMP TRUCKS



EARTHMOVING
BUCKETS



BULL DOZERS



LHD
UNDERGROUND
BUCKETS

WITHOUT KIT





GRADES

ARCOPLATE 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

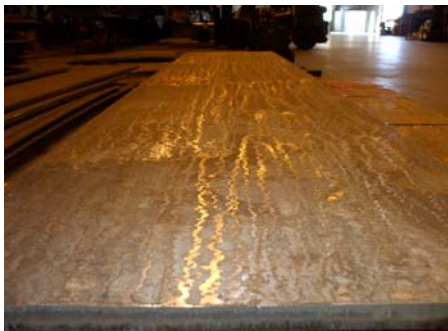
THICKNESSES

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

THICKER PLATES AVAILABLE ON REQUEST
STANDARD PLATE SIZE: 610MM X 3080MM



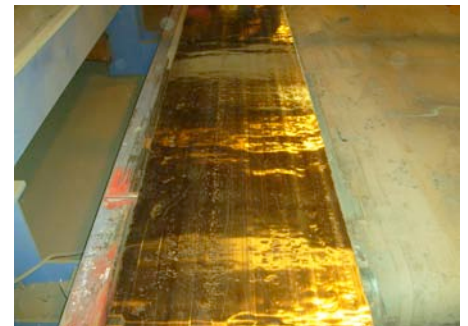
SURFACE FINISHES



STANDARD FINISH



POLISHED FINISH



ULTRA FINISH

All Grades of ARCOPLATE can be polished for anti hang-up applications



HARDNESS MISCONCEPTIONS

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.

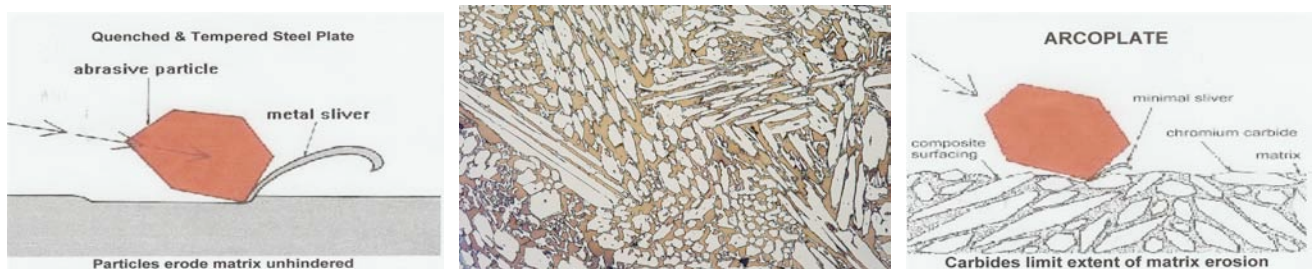
Abrasion resistance depends on a combination of both bulk hardness and the metallurgical microstructure of the alloy.

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:





FACTS AND BENEFITS

ARCOPLATE, the world's most wear-resistant fused-alloy steel plate, is a hard-faced wear plate that gives the following benefits:

- | | |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MANUFACTURING PROCESS IS FULLY COMPUTERISED: | Uniform hardness (58 – 62 Rc) and microstructure down to the 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 20mm): | No under bead cracking and spalling as experienced with multi pass layers |
| THICKNESS OPTIONS: | Alloy Depth: 6, 8, 10, 12, 16 & 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 overlay plate by 2 to 1 |
| NON – DIRECTIONAL WEAR PLATE: | Can be fitted in any direction to material flow |

Representative Details



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