



Welding
Alloys
Group

Hardlite™

ULTRA HARD
ULTRA LITE



ACTING GLOBAL
WELDING LOCAL

WA Hardlite™

Ultra-thin composite wearplates

Success through innovation

This brochure presents the features of composite Hardlite™ wear plate, from the manufacturing process, the wear deposit characteristics and resistance, to the applications. We will gladly examine any special request. Please do not hesitate to consult us.

Benefits of the WA solutions



Economic approach: assembly and disassembly + loss of production
We help you to get the overall cost down



Service approach: service life + yield + production quality
We help you to increase production performance

WA Integra: 3 types of service

- Supply of wear plate for reworking
- Supply of pieces prepared to specification and ready for assembly
- Construction of assembly in our workshops or turn-key projects on site

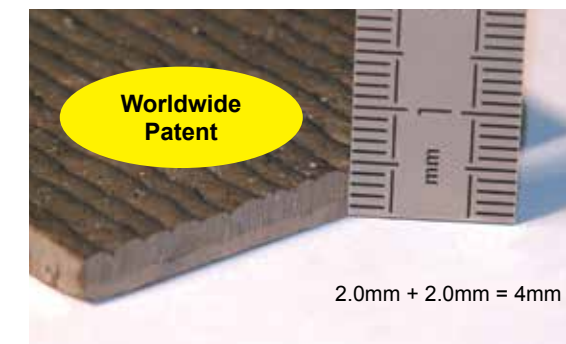
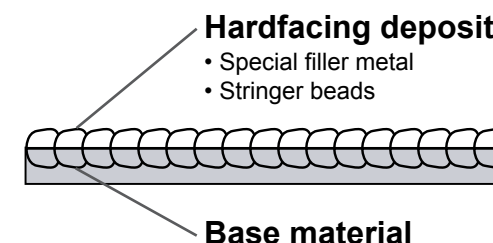
The service performance of composite Hardlite™ wear plate - designed, developed and manufactured by Welding Alloys - has proven that great cost savings can be achieved compared to replacement with a new part, either cast or forged.

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Hardlite™ Process and Features

Ultra-thin composite wear plate – less than 5mm



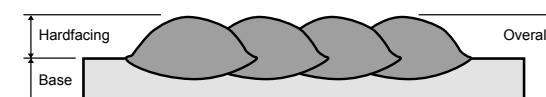
Specific composite Hardlite™ wear plate process

- Quick solidification of the weld deposit
- Homogeneous microstructure with high volume of chromium carbides
- Optimum hardness (66-68 HRC - harder than quartz) adapted to extremely high wear resistance and moderate impact
- Fair corrosion resistance
- Outstanding wear properties up to approximately 200°C
- High temperature resistant and corrosion resistant Hardlite™ also available (see page 7 for more details)

Dimensions:

- 1950mm length x 950mm width

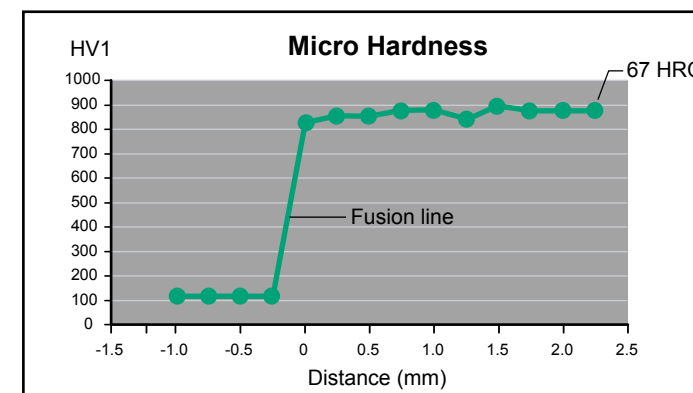
Special sizes can be manufactured – please check with your local sales office



Thickness:

Base	Hardfacing	Overall
2mm	2mm	4mm
2mm	3mm	5mm
3mm	2mm	5mm
3mm	3mm	6mm

Wear deposit characteristics:



Technical data:

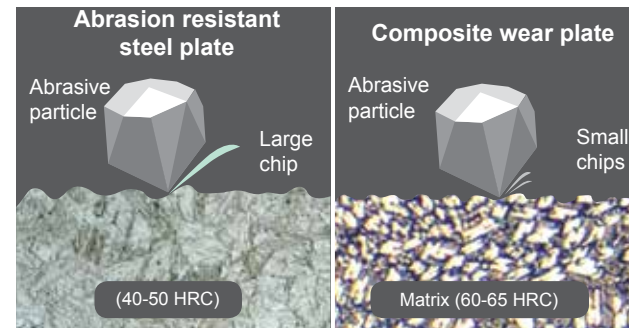
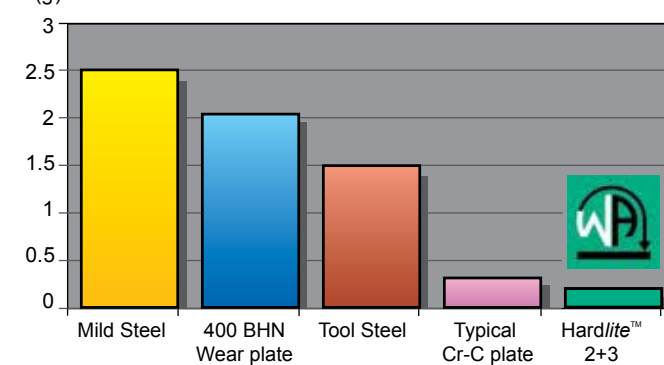
Microstructure

Fined grained, saturated with microscopic chromium carbide particles. Total carbide content averages 92%*.

* Independent laboratory test.

Comparative wear tests

Wear (g) **ASTM G65 Results**



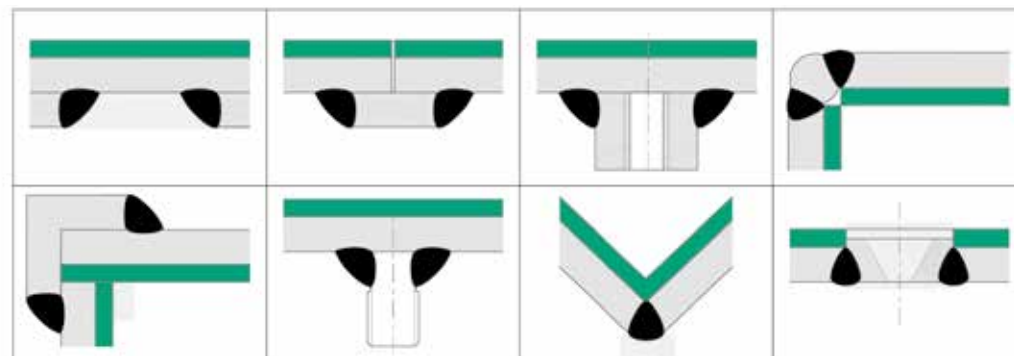
Principal industries

- Steelmaking
- Cement
- Mines
- Quarries
- Public works
- Glassmaking
- Brickmaking
- Recycling
- Agriculture
- Dredging
- Thermal power stations
- Waste incinerators

Examples of applications

- Hoppers
- Chutes
- Buckets
- Pipework
- Elbows
- Armouring
- Screen
- Fan blades
- Cyclones
- Screw conveyors
- Classifier blades
- Riddles

Examples of fixing:



(Technical and application data sheets on request)

Ease of use

Numerous fixing and assembly processes are possible.

Welding and cutting processes do not affect the wear properties of the Hardlite™ plate. Matching weld materials are also available for the protection of internal joints and seams.

Hardlite™ plate can be cut and formed easily. It is used for armouring or double facing of components subjected to static or dynamic constraints:

- Specially adapted for applications where weight is restricted
- More adaptable, lighter, harder
- Advantageous for moving parts

Cement



Isolation valve



Reducing cone



Endless screw conveyor



Tube $\phi < 2.5''/60\text{mm}$



Internal armouring of a vertical crusher



Cement works - cone

Replacing worn components with Hardlite wear plates offers many benefits. Hardlite™ is light, easy to install and can significantly reduce normal maintenance costs.

Cement



Cement works - classifier



Cement works - square > round



Cement mill - metering/vibrating table



Cement mill

Steel



Steel mill - fan



Steel mill - sinter dust extractor ducting

Various



Vibrating riddle plate



Turbo-mixer flukes

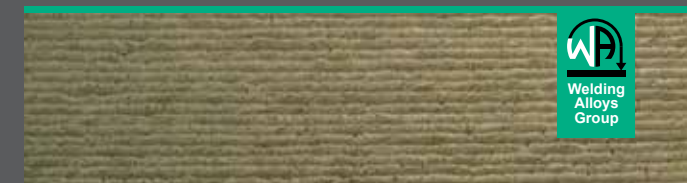


Separator bars



Gas recycling conduit for glassworks

High temperature and corrosion resistant
Hardlite™ wear plate



Hardlite™ (SS)

Ultra-Hardlite™ (SS)*
Coal nozzle - power station

Examples:

- Corrosion resistant Hardlite™ with chromium carbides: Hardlite™ (SS)*
- High temperature resistant Hardlite™ with complex carbides: Ultra - Hardlite™ (SS)*
- Up to 1100°F (593°C)

*Stainless Steel

Our Technical 'Spark' Solves Your Industrial Challenges



WA Consumables

The go-to provider
of advanced welding
consumables



WA Machines

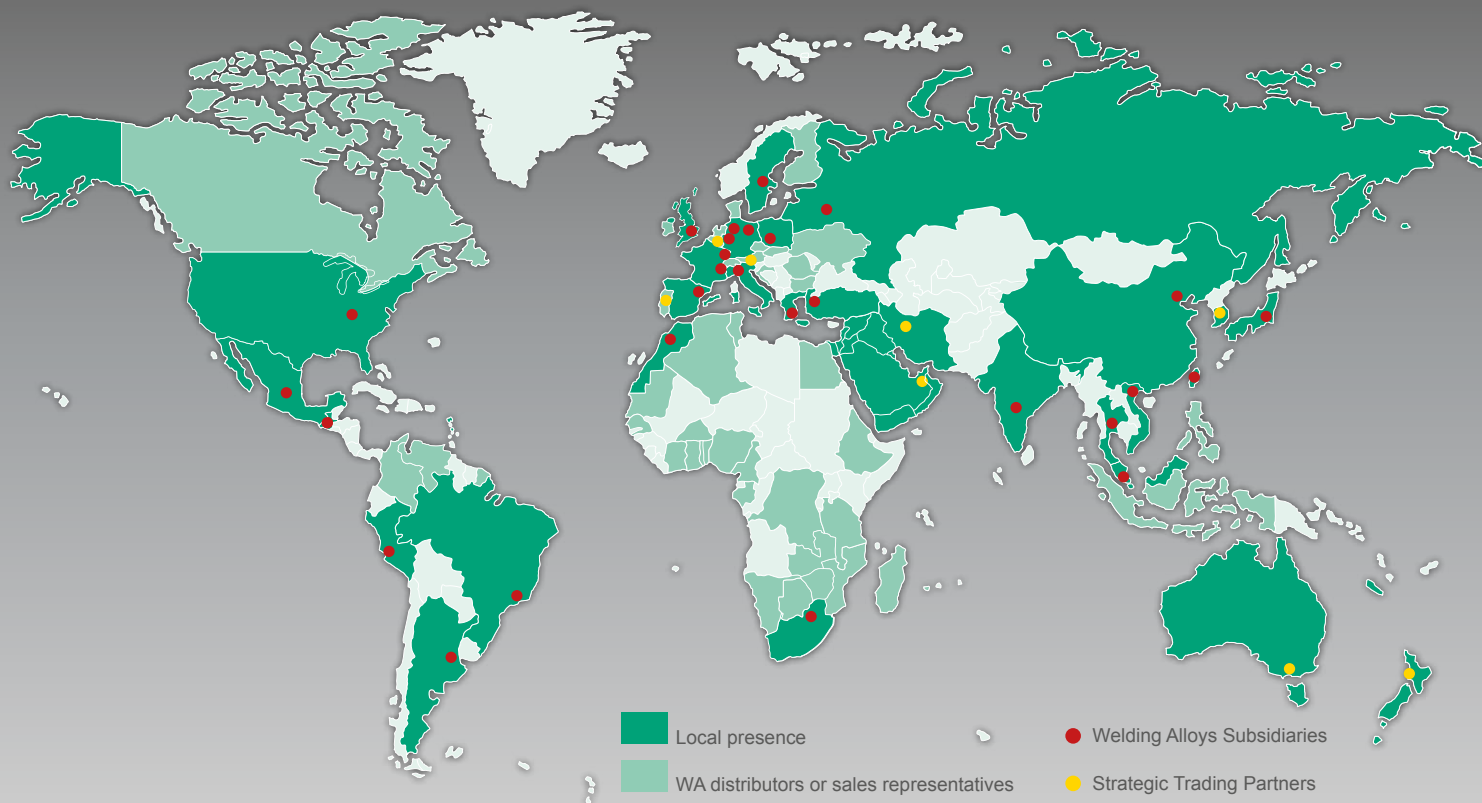
The go-to provider
of automated equipment
for wear protection



WA Integra™

The go-to provider
of engineered wear
protection solutions

A worldwide presence



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