Hardlite™

Ultra-thin composite wearplates
Success through innovation

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

<table>
<thead>
<tr>
<th>Hardfacing deposit</th>
<th>Base material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special filler metal</td>
<td>Stringer beads</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Thickness:</th>
<th>Base</th>
<th>Hardfacing</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>2mm</td>
<td>2mm</td>
<td>4mm</td>
<td></td>
</tr>
<tr>
<td>2mm</td>
<td>3mm</td>
<td>5mm</td>
<td></td>
</tr>
<tr>
<td>3mm</td>
<td>2mm</td>
<td>5mm</td>
<td></td>
</tr>
<tr>
<td>3mm</td>
<td>3mm</td>
<td>6mm</td>
<td></td>
</tr>
</tbody>
</table>

Wear deposit characteristics:

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

Technical data:
- * Independent laboratory test.
Comparative wear tests

**ASTM G65 Results**

<table>
<thead>
<tr>
<th>Material</th>
<th>Wear (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild Steel</td>
<td>0.5</td>
</tr>
<tr>
<td>400 BHN Wear plate</td>
<td>1.2</td>
</tr>
<tr>
<td>Tool Steel</td>
<td>1.8</td>
</tr>
<tr>
<td>Typical Cr-C plate</td>
<td>2.5</td>
</tr>
<tr>
<td>Hardlite™</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**Principal industries**
- Steelmaking
- Cement
- Mines
- Quarries
- Public works
- Glassmaking

**Examples of applications**
- Hoppers
- Chutes
- Buckets
- Pipework
- Elbows
- Armouring
- Screen
- Fan blades
- Cyclones
- Screw conveyors
- Classifier blades
- Riddles

**Examples of fixing:**

**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

Examples of fixing:

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
- Cement mill - metering/vibrating table

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

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

A worldwide presence

Local presence
WA distributors or sales representatives
Welding Alloys Subsidiaries
Strategic Trading Partners

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