



ACTING GLOBAL
WELDING LOCAL

**Classifier Equipment
Wear Prevention**
WA Integra solutions for
wear prevention in the cement industry

Customer Case Study

One of the major cement plant producers in the UK which uses vertical mill grinding plants has called upon Welding Alloys Integra to help limit the effect of wear, abrasion and impact on its mill machinery.

Their maintenance manager said "We have been suitably impressed with the Hardlite trials over the last five years. The sheets of Hardlite have performed exceptionally well and have lasted an extremely long time. We very much like the product; especially its all round versatility and durability."



Worn Classifier prior to refurbishment

Case Study

Hardlite Application - Classifier Base Refurbishment

WA Integra has many years of experience in the refurbishment of classifier equipment & components. Recently we repaired the base of a classifier which was being exposed to a significant amount of wear. The wear occurred when cement particles were lifted by the air flow within the mill and colliding with the surface of the separator frame, which got worn away over a period of time. Hardlite was chosen to repair the classifier due to its light weight construction and proven abrasion resistance properties.



Prepared fabricated Hardlite parts

One of the major benefits to customer was the fact that the components were repaired in-situ and laser cut parts of Hardlite were fitted without moving the classifier. Another advantage with this application, was the ease and simplicity in fabricating and rolling the Hardlite parts due to the plate thickness of the materials used. Once refurbished regular checks were conducted on the Classifier base and one year after the surface was fabricated with Hardlite it shows virtually no wear at all.

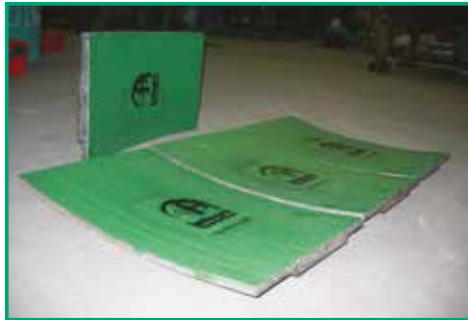


Installation being implemented

Cement Raw Mill Classifier

WA Fabricated Classifier Parts

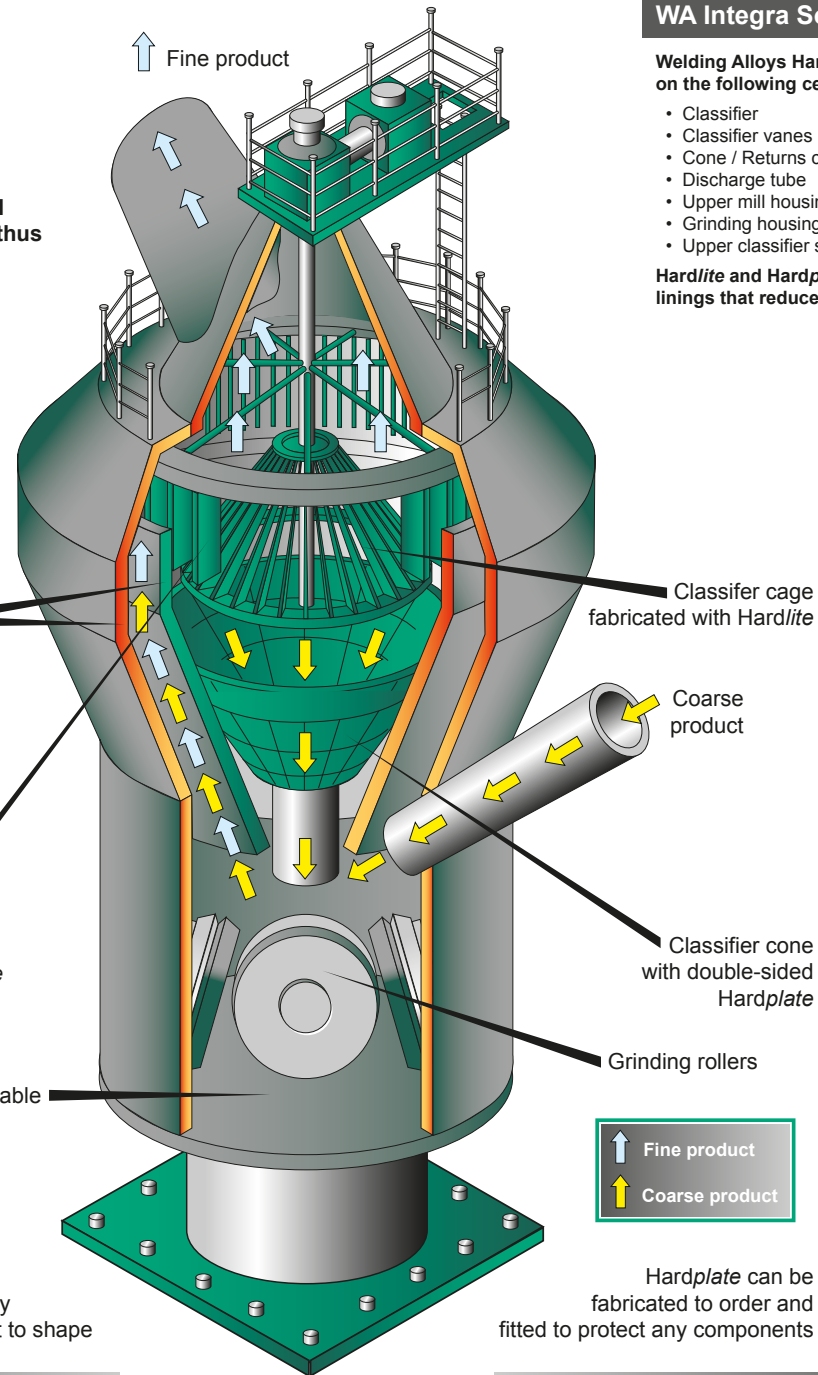
Welding Alloys Integra has significant experience in wear prevention within cement mill classifiers and the protection of their vital components. Our WA *Hardlite* and *Hardplate* product range offers superior solutions that will minimise abrasion and impact, and therefore reduce maintenance costs. In turn this will extend cement and raw mill availability until planned shutdown, thus maximising profitability.



Fabricated mill lining plates

Fan blades protected with *Hardplate* or *Hardlite*

Hardlite can be easily bent, formed and cut to shape



WA Integra Solutions

Welding Alloys *Hardlite* and *Hardplate* are ideally suited for applications on the following cement plant equipment:

- Classifier
- Classifier vanes (fixed / moving)
- Cone / Returns cone
- Discharge tube
- Upper mill housing
- Grinding housing lining plates
- Upper classifier support arms

***Hardlite* and *Hardplate* can be fabricated and fitted to produce parts or linings that reduce excessive wear from impact and abrasion.**



Coarse product

Classifier cone with double-sided *Hardplate*

Grinding rollers

↑ Fine product

↑ Coarse product

Hardplate can be fabricated to order and fitted to protect any components

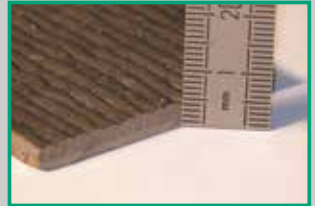
WA wear plates and wear prevention

Our range of plates are available in standard dimensions or made to measure, in the widest range of thicknesses for numerous applications throughout classifiers and their vital components.

WA Hardlite

Hardlite is the preferred solution for the maintenance of classifier components and offers the following benefits / features:

- Specially adapted for applications where weight is restricted
- Can be fabricated or shaped to protect vital areas of high abrasion
- Ultra-thin (less than 5mm thick)
- Keeps its outstanding properties up to 200°C
- Hardness of 66-68HRC (harder than quartz)
- Can protect components that are subjected to static/dynamic constraints
- Light and robust to cope with severe abrasion, shock/wear on moving parts



WA Hardplate

Hardplate is heavy duty composite wearplate for use in a wide variety of component refurbishment applications and offers the following benefits / features:

- Base metal and coating thickness is selected according to the application
- Can be fabricated or shaped to protect vital areas of high abrasion
- A choice of coating types available with stringer or oscillated welding bead
- Keeps its outstanding properties up to 200°C / 400°F (dependent upon plate spec)
- Hardness of Hardplate varies 60-64 HRC (depending upon plate variant specified)
- Plates are used for armouring or double facing components that are subjected to static/dynamic constraints
- Designed to withstand moderate impacts



WA Fabricated Plate Services

Integra's fabricated plate service ensures that all our wearplates are professionally fitted. Our service includes:

- Quotations and the manufacturing of parts from drawings
- Cutting, rolling and bending components
- Numerous fixing and assembly options available which include welding, bolting etc

All plates can be supplied using three different types of service:

- Supply of wear plate fabricated by Welding Alloys
- Supply of pieces prepared to specification and ready for assembly
- Construction and refurbishment of parts in our workshop or assembly carried out on-site.



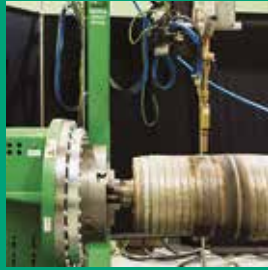
Full project management is available for the refurbishment of classifier equipment & components.

Our Technical 'Spark' Solves Your Industrial Challenges



WA Consumables

The go-to provider of advanced welding consumables



WA Machines

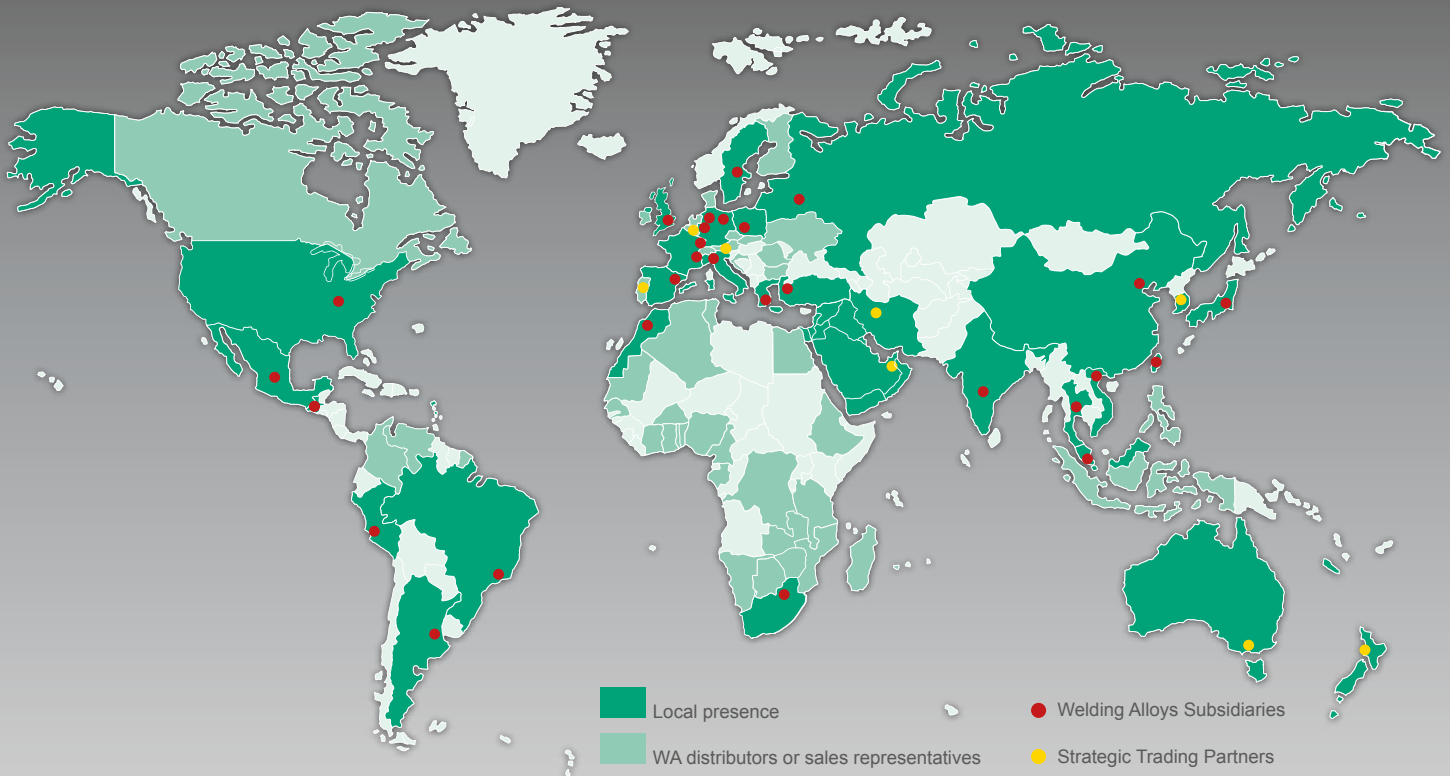
The go-to provider of automated equipment for wear protection



WA Integra™

The go-to provider of engineered wear protection solutions

A worldwide presence



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