

Composite Ceramic Wear Liners



Engineering design.

Trelleborg manufacture a complete range of composite ceramic wear liners for use in Bulk Material Handling environments including slurry through to oversize material applications.

Trelleborg will design and engineer 'fit for purpose' wear liner packages to achieve service longevity, predictable wear rates and liner layouts to suit the asset and application.

Trelleborg can refurbish rotatable spares or supply new equipment as a one stop shop, arranging

fabrication, on site abrasive blasting and painting and fitting wear liners.

Trelleborg welcomes the opportunity to work closely with site personnel on liner improvements, chute audits and recommendations.

Wear and Abrasion - Why Use Ceramics?

Composite Ceramic Wear Liners consistently demonstrate and prove to be the lowest cost per tonne wear liner on the market.

- Very High Quality Rubber and Ceramic
- Competitively Priced
- Designed 'Fit for Purpose' Wear Liners
- Single Liners or Kits
- Complete design and Technical Support
- Energy absorbent Design
- Extended WEAR Life compared to steel liners
- Monitoring and Reporting support
- Very Low Cost Per Tonne ROI



BattleTough

Trelleborg BattleTough Composite Ceramic wear liners are designed for medium to heavy duty applications.

Utilising Trelleborg's premium rubber compounds and independently quality tested alumina ceramics, Battletough is a proven and approved composite ceramic wear liner within the Australian Mining Sector.

Liners can be supplied cut and studded to replace steel liners without any modifications to the chute's steel work.

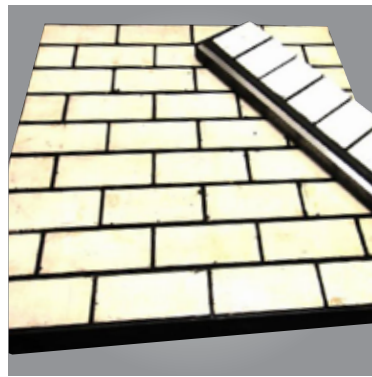
To support reduced lead times and support of client schedules, Trelleborg stocks, cuts and studs BattleTough liners in our Kewdale Rubber and Ceramic facility.

Our Range



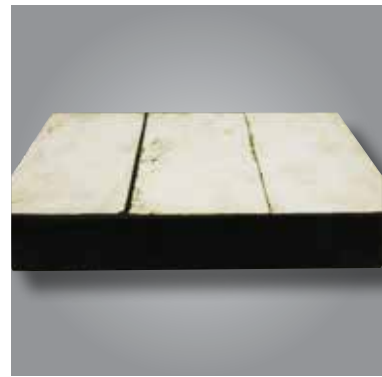
BT32

20mm Tile
6mm steel backing plate
6 mm rubber



BT64

50mm Tile
6mm steel backing plate
8mm rubber



BTLF

100mm x 150mm x 50mm Tile
6mm steel backing plate
6mm rubber

Ceramic on Rubber Mats

Ceramic on rubber mats are available in varying thickness to suit different applications, the mats are supplied with a CN bonding layer and are ideal for lining over the top of rubber in high wear areas such as cyclone launders, dividers, screen underpans.

Hex ceramic mats are approximately 500 x 500mm, available with two different size hexagonal tiles:

- 20mm AF for flat surfaces
(no rubber between tiles)
- 13mm AF for curved surfaces
(approx. 1mm of rubber between tiles)
- 6mm square tiles for tight curved surfaces
(down to approx. 150mm diameter).

All hex ceramic mats are supplied with a bonding layer so no buffing / preparation is required for installation on site.

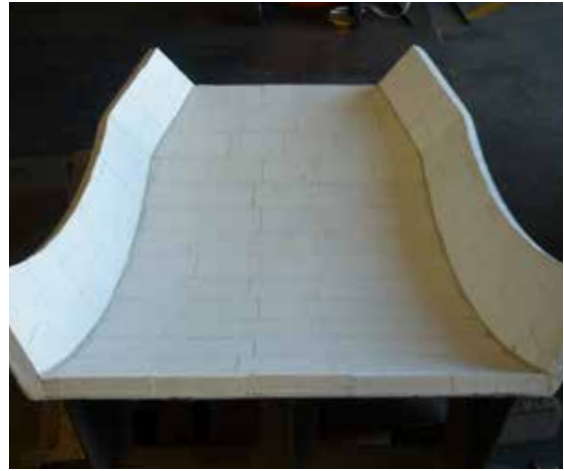


Direct Bond Ceramics

When traditional fixing and bolting methods cannot be employed Trelleborg's Industrial Ceramic Tiles are produced with the highest quality alumina ceramic. We offer only the highest wear materials available for abrasion protection.

Trelleborg's Alumina Ceramic Tiles deliver excellent wear resistance, excellent mechanical in slurry and sliding abrasion environments. Trelleborg can supply alumina tiles in a variety of standard sizes and shapes that can be installed to suit your application.

Our trained applicators employ the use of high strength Ceramic Tile Adhesive be used for bonding the Alumina tiles where applicable.



Ceramic Versus NiHard Case Study

Application

- Primary Crushed Copper / Gold Ore
- Material size $\leq 600\text{mm}$
- Drop Height 3m

Results are following a 12 week trial.

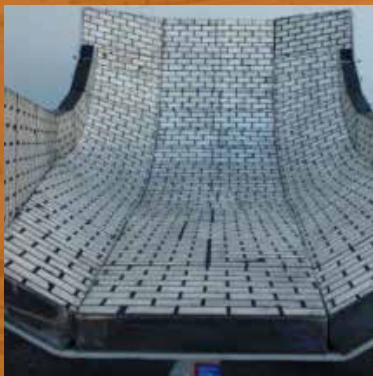


The main impact zone was fitted with composite NiHard liners at the same time the BattleTough Ceramic was installed.



By comparison the NiHard liners lost approximately 30mm compared to an average loss of around 2-4mm for the ceramics

Ceramic Wear Liner Applications



Deflectors



**Spill Face Sloping Walls
& Loading Chutes**



Launders



Old Obsolete Design



New Re-Design

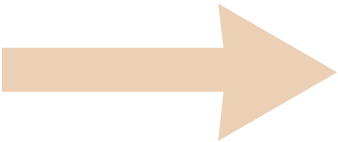


**Completed Re-Designed
Deflector Ready for Service**



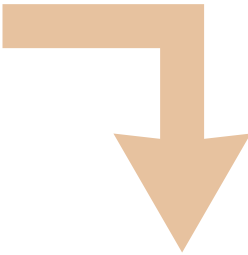
WORN EQUIPMENT

Defectors, Discharge Chutes,
Loading Boots, Apron Feeders



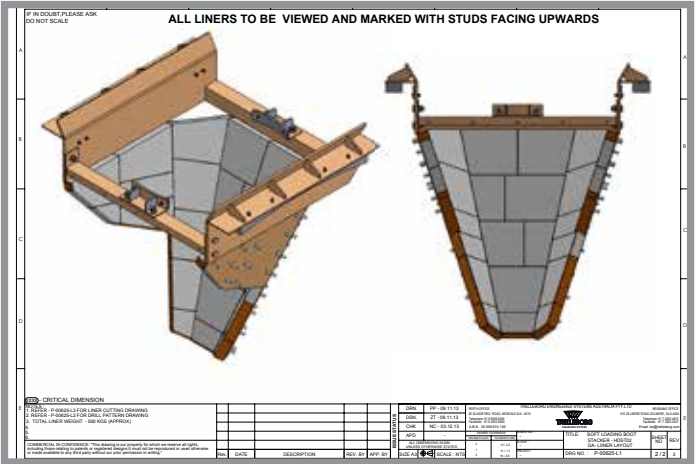
INSPECT & REPORT

Liner Removal
Strip and Assess
Report and recommendations to client

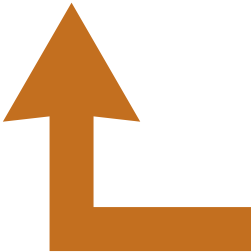


COMPLETED RESULT

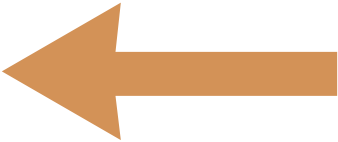
Welcome to the
world of Trelleborg



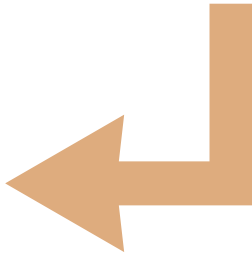
COMPLETE DRAFTING PACKAGE



STUDDING, CUTTING AND FITTING



**BLASTING AND PAINTING
REPAIR AND FABRICATION**





Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Our innovative engineered solutions accelerate performance for customers in a sustainable way. The Trelleborg Group has local presence in over 40 countries around the world.

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