

Presenting: ilse schutz, llc

▶ Your service partner for Wear Protection



Legal incorporation in Florida in 2013

Web: www.ilse-schutz.com

Email: inbox@ilse-schutz.com

Tel: +1 (754) 333 4560



What we do ...



Ilse Schutz LLC is the Representative of **Wear Protection Engineering GmbH** (“WPE”) in the America Continent.

We sell the German quality of WPE products and service



- ▶ 1) Ceramics/Basalt wear protection systems
- ▶ 2) Alternative wear protection systems using innovative engineering concepts

How we do ...



Our guiding principles for delivering with safety are:

- ▶ Safety is non-negotiable
- ▶ The standard you walk past is the standard you accept
- ▶ We all responsible for ensuring a safe workplace
- ▶ All injuries are preventable

Product 1: Diamond

- ▶ WPE Diamond is a high wear resistant and ultra dense ceramic concrete.



Very good for protection against minerals in sliding contact with steel, eg. Chutes, Pipelines, Vertical mill outlets, Filter inlets.

- ◆ Installation like a concrete mix from 25kg sacks
- ◆ Ready to go after about 48h. Shorter times can be engineered.
- ◆ Lifetimes of 8-20 years are common if installed properly.

Product 2: Cast Basalt

- ▶ High wear resistance maintains a smooth even surface for favorable flow conditions

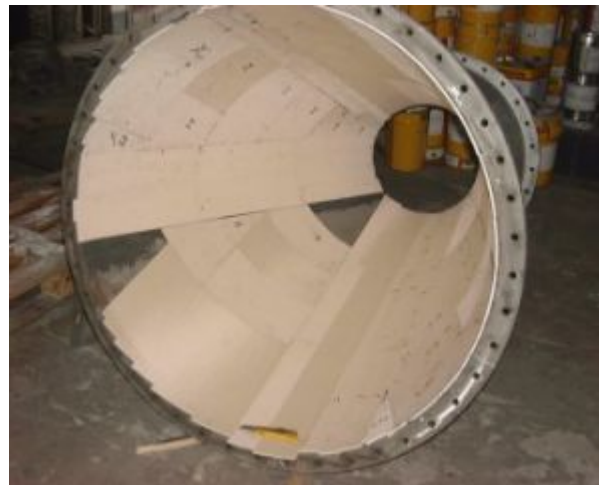
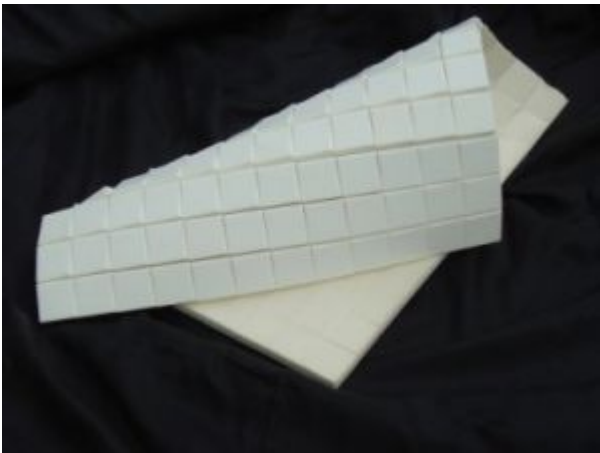


Used commonly in silos, hoppers, cyclones
Ducts, pneumatic/hydraulic transport pipelines

- ◆ Raw material is extracted from special grade natural basalt.
- ◆ Installation in tiles format, various fixing systems
- ◆ Smooth when installed properly
- ◆ Lifetimes of 3-10 years are common = good life/cost ratio.

Product 3: Alumina Ceramic

- ▶ Ceramic for high impact and extreme wear with backing to reduce impact and noise levels.

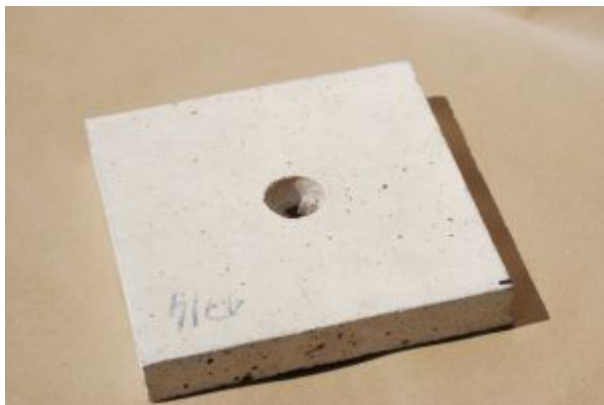


Lower process temperatures with extreme wear
Complex geometries

- ◆ Tiles glued onto special acetate-silk material or rubber backing
- ◆ Various quick fixing methods; grooved sides to ensure tight fit
- ◆ Lifetimes of 5-10 years even with high corrosive mediums.

Product 4: Zirconia Oxide

- ▶ Composite material made of alumina and Zirconia oxide for excellent chemical resistance



For Hoppers, Cyclones, Ducts/chutes

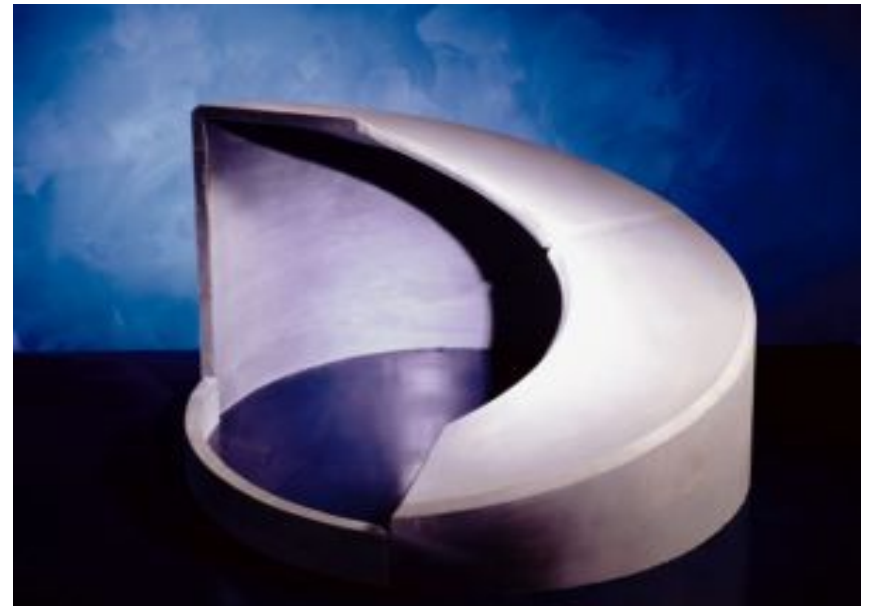
- ◆ High process temps <1000 C
- ◆ Resistant to most solvents, acids, petroleum products, alkalis
- ◆ Quick installation of pre-formed shapes (high complexity)
- ◆ Lifetimes depend on chemicals involved and stress situations.

Product 5: Silicon Carbide Ceramic

- ▶ High quality SiC raw materials mixed with binder, casted in exact forms and sintered.



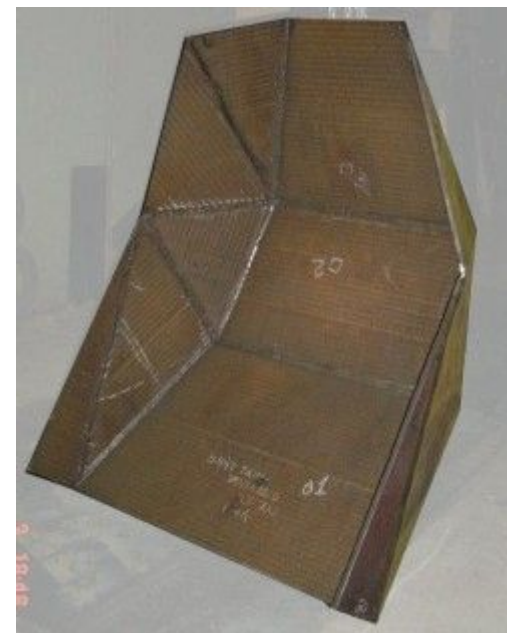
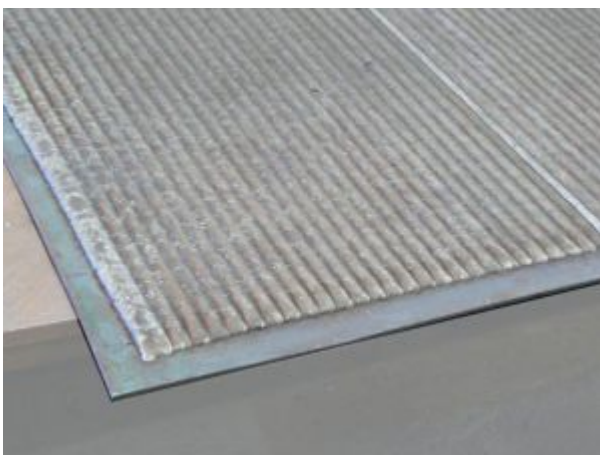
For pipe components, burner nozzles,
Ammonia reformers, gas turbines



- ◆ High process temps < 1300...2000 C (as per formula used)
- ◆ Resistant to most solvents, acids, petroleum products, alkalis
- ◆ Dimensional accuracy to tight engineering tolerances
- ◆ High thermal shock resistance.

Product 6: Hardfaced Steel Plate

- ▶ Bimetallic plates made by a special welding process for high impact or thermal expansion



Separator, vertical roller mills, shovels, screens

- ◆ Installation by weld, weld on nuts, threaded stays with bolts or other mechanical fastening systems
- ◆ Homogeneous micro-structure, optimum carbide distribution, > 60% of primary carbide, very low dilution with base material

Product 7: Epoxy Compound

- ▶ Epoxy based trowelable material provides a surface resistant to abrasion / chemical attack.

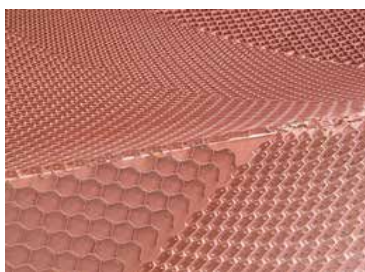
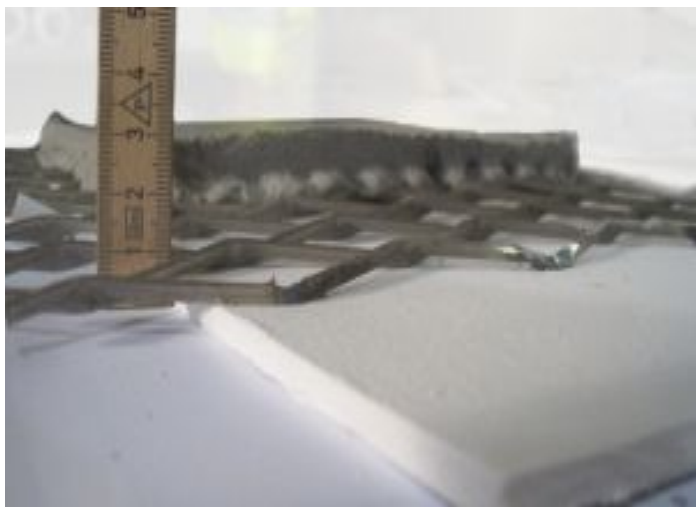


Pitting and/or erosion in wet systems, pumps, etc.
Also prepared concrete constructions.

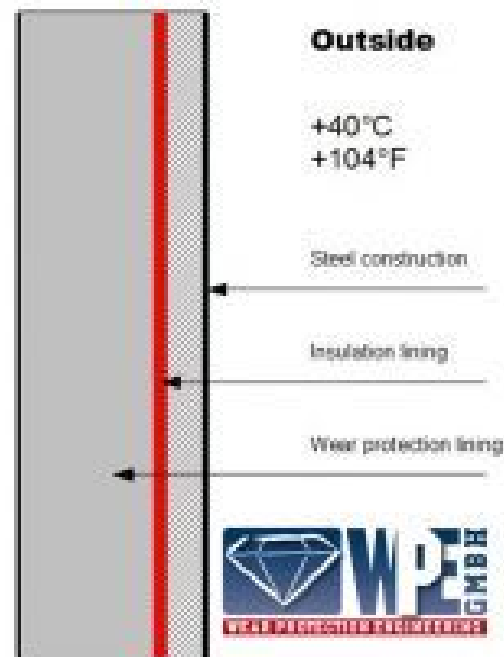
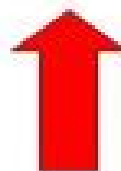
- ◆ Installation with simple hand tools or spray; smooth end result.
- ◆ Can be cast/molded/patched into a wide variety of geometries
- ◆ Lifetimes shorter but quick to install with short curing times.

Product 8: Therm-Combi system

- ▶ An insulation system with wear and corrosion protection in extreme process temperatures



+ 700°C
+ 1292°F



Tertiary air duct, High temp cyclones,
Tilting devices, Ladle turning towers

- ◆ Installation like a concrete mix; lighter/cheaper than refractory
- ◆ Smooth very resistant surface with encapsulated insulation
- ◆ Lifetimes of 8-20 years are common if installed properly.

Product 9: DiaTop

- ▶ A strong anchored top layer flooring system for areas of high traffic of heavy loads.



Factory floors with heavy impact risk, Heavy load pathways,
Bridge reinforcement, Harbours, Airport taxiways, Mine passages

- ◆ Installation as pumpable mass like concrete but faster curing
- ◆ Compressive strength between 120 and 180 MN/m.
- ◆ Lifetimes 3 to 10 times of normal concrete solutions

Product 10: DiaSec

- ▶ Castable ceramic material in the security industry for fixing vaults and bomb shelters

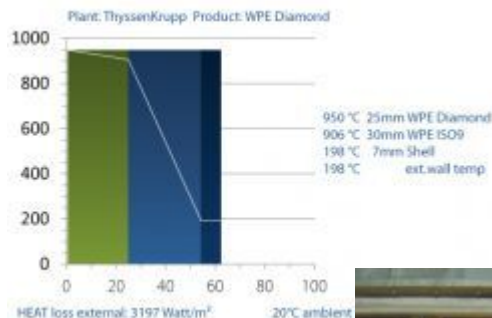


Bomb shelters, bank cash machine installation, jeweller vault foundations, protective walls for military or private safe rooms

- ◆ Dry-mix with aggregates of extreme high quality special fibres
- ◆ Smooth hard surface with micro-steel fibre reinforcement
- ◆ 10 times the toughness against hydraulic hammers or projectiles

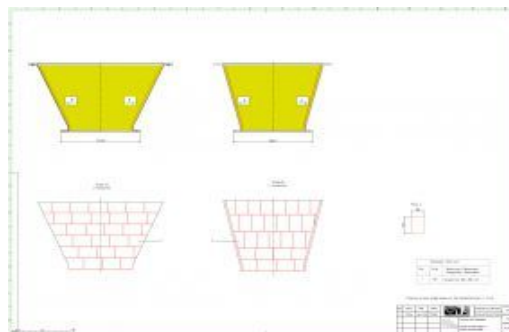
▶ Engineering

Specific wear protection and installation solutions
 Heat transfer calculation
 Preparation of installation drawings
 Damage analysis



▶ Installation

Work shop installation
 Customer site installations
 Worldwide supervisor service
 Turn-key service in EU



▶ Maintenance

Custom specific repair prediction and planning
 Availability of materials and personnel
 Patching of worn out wear protection linings

▶ Service

Training of installers and customer technicians
 Inspection of plant equipment wear problems

Conclusion



www.ilse-schutz.com

inbox@ilse-schutz.com



Ilse Schutz: your partner for special and challenging wear protection solutions in America.

We insist **on high safety** standards
and top quality products.

Our german office **is standing by** for your inquiries.



▶ Office



▶ Workshop