VATIS

Ceramic

Oplossingen tegen slijtage en aanplakken

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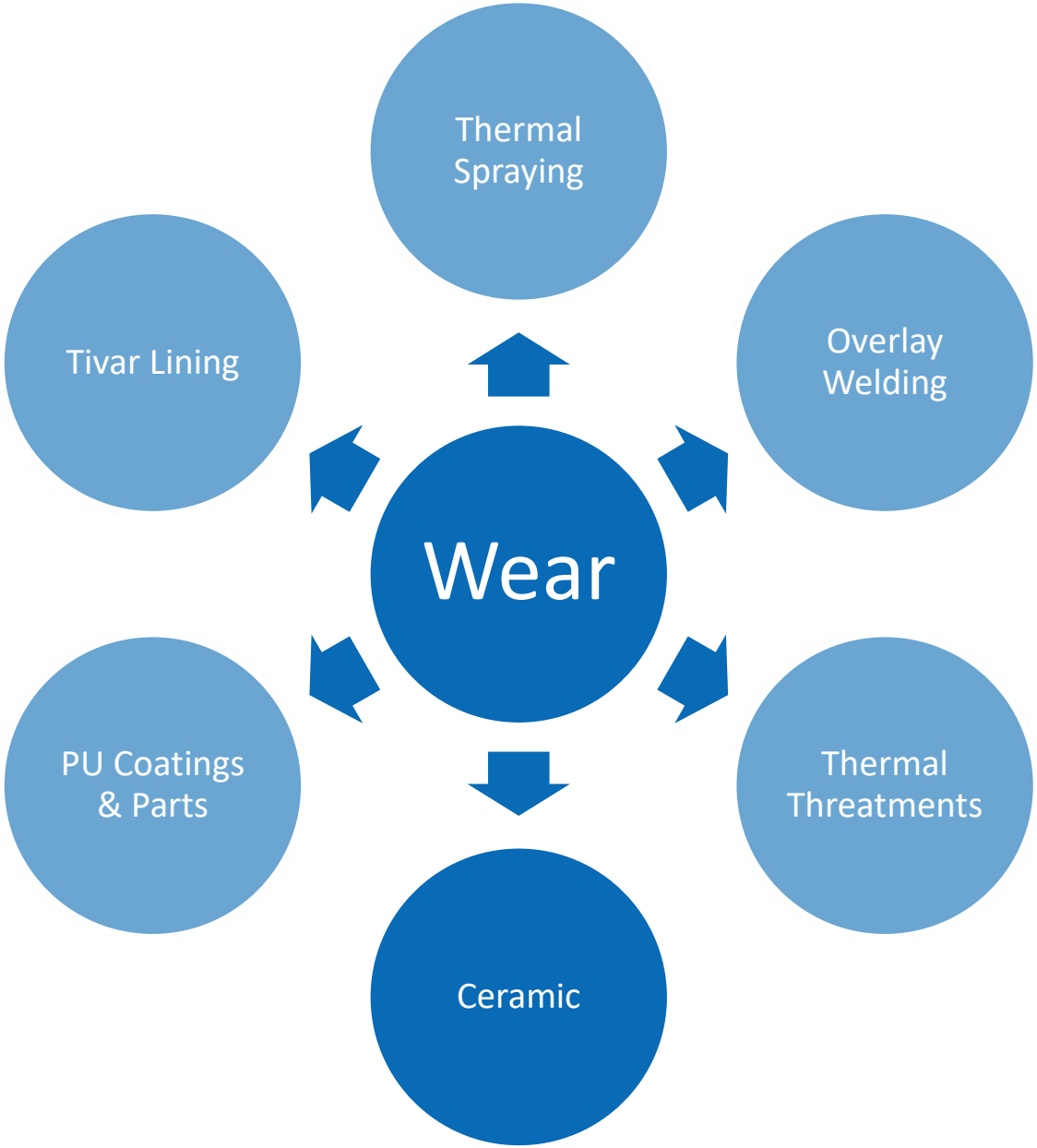

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Ceramics: Overview

- Type Ceramics
  1. Sintered wear resistant ceramics: AL2O3 min 92%
  2. Cast ceramic: Basalt
  3. Paste: 2-component ceramic
     - Silicone Carbide as cast components
     - Silicone Carbide 2-component paste (spatula or brush)

- Objective
  - Wear resistant components
  - Wear resistant liners
  - Repair of worn-out parts

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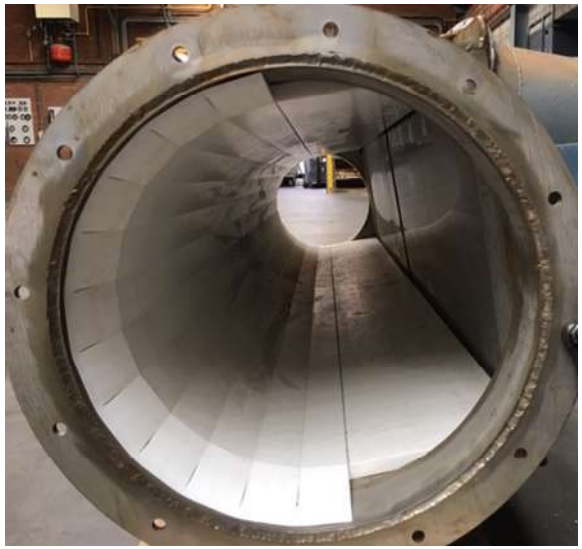
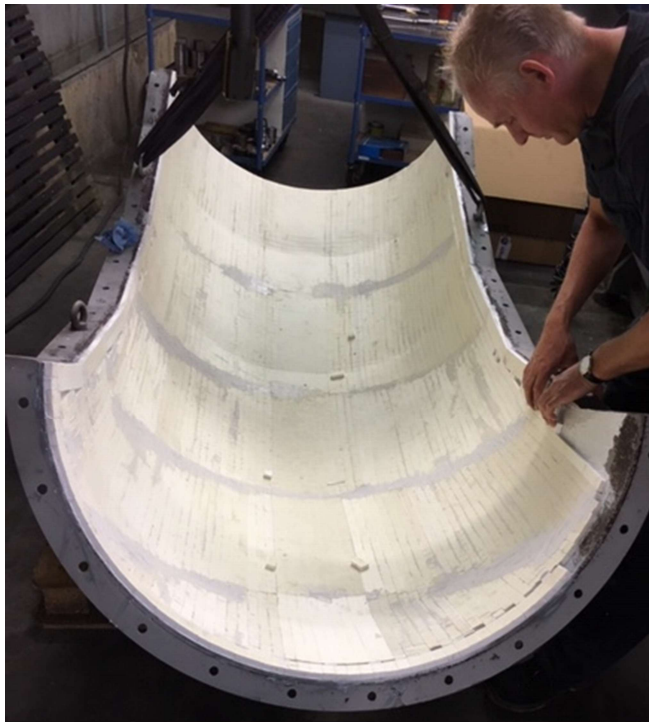
Ceramics: Engineered sintered Al_2O_3

- Typical Applications
  - Pipe elements for pneumatic transportation:
    - Ceramic segments with ID 25 – 200 mm
    - Larger ID with ceramic tiles
    - Large diameters often combination with metal wear plates





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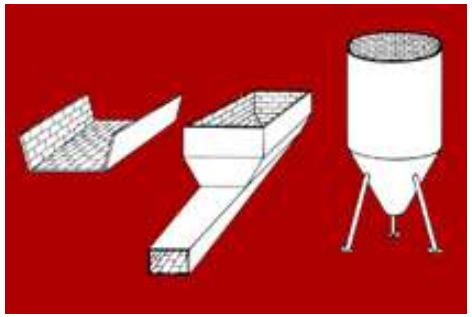
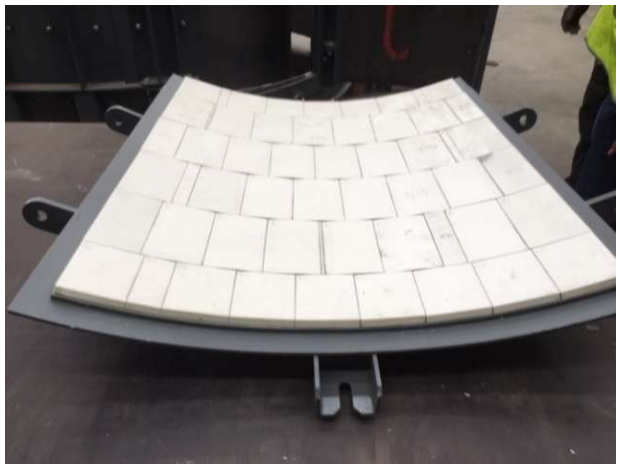
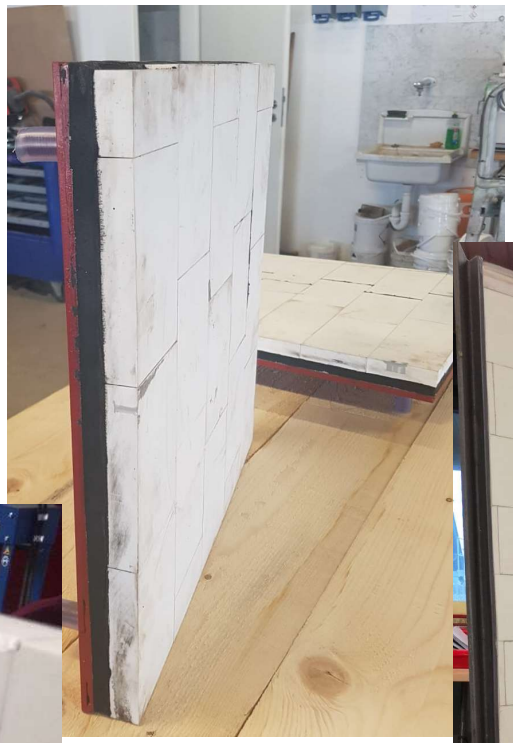
Ceramics: Engineered sintered Al_2O_3

- Cyclonen, gutters, hoppers







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Ceramics: Basalt

- Typical applications
  - Industrial linings in steel mills and power plants: Gutters, floors, hoppers…

  - Lining of pipe elements (typical h transport and large sizes): tubes, reducers, T-parts

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Ceramics: Basalt 2000°C

- Alternate to Basalt
- Process
  - Melting in electric furnace at 2000°C
  - Cycle of thermal treatments for re-crystallization for improved wear resistance properties

- Properties
  - Higher hardness and wear resistance
    Hardness 9 Mohs
  - Max. Temperature: 1000°C
  - Similar applications; specific lining of tubes and several cast components.

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Ceramics: Silicon Carbide

- Silicon Carbide almost diamond-hard synthetic mineral
- Process
  - castable silicon carbide, is produced using a hot-curing
  - epoxy resin and silicon carbide
  - silicon carbide composite, are produced using
  - a cold-curing epoxy resin and silicon carbid

- Properties
  - Mohs hardness: 9,7
  - compressive strenght: 193 Nmm
  - tensile strenght: 23,5 Nmm
  - density: 2,52
  - apparent porosity: 0
  - max. temperature range: 135°C
  - Chemical resistance: pH 0 – pH12

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Ceramics: Silicon Carbide

- Typical applications
  - Wear parts

  - Repair of worn parts

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