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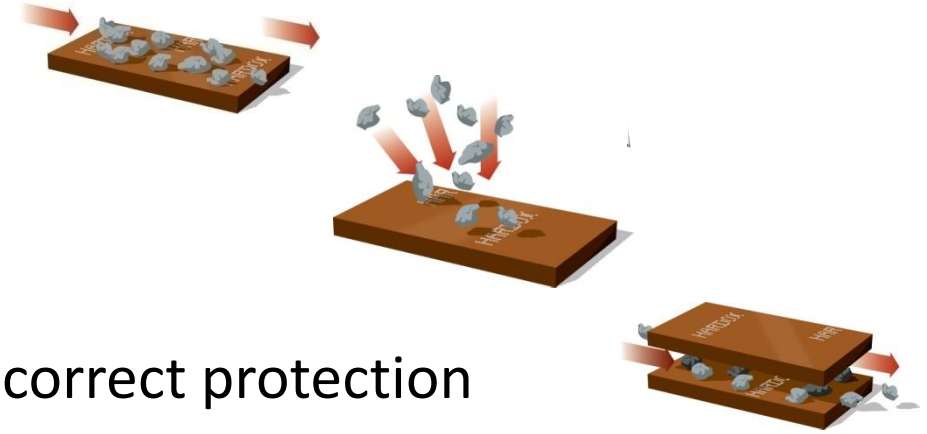
General product presentation for TRF

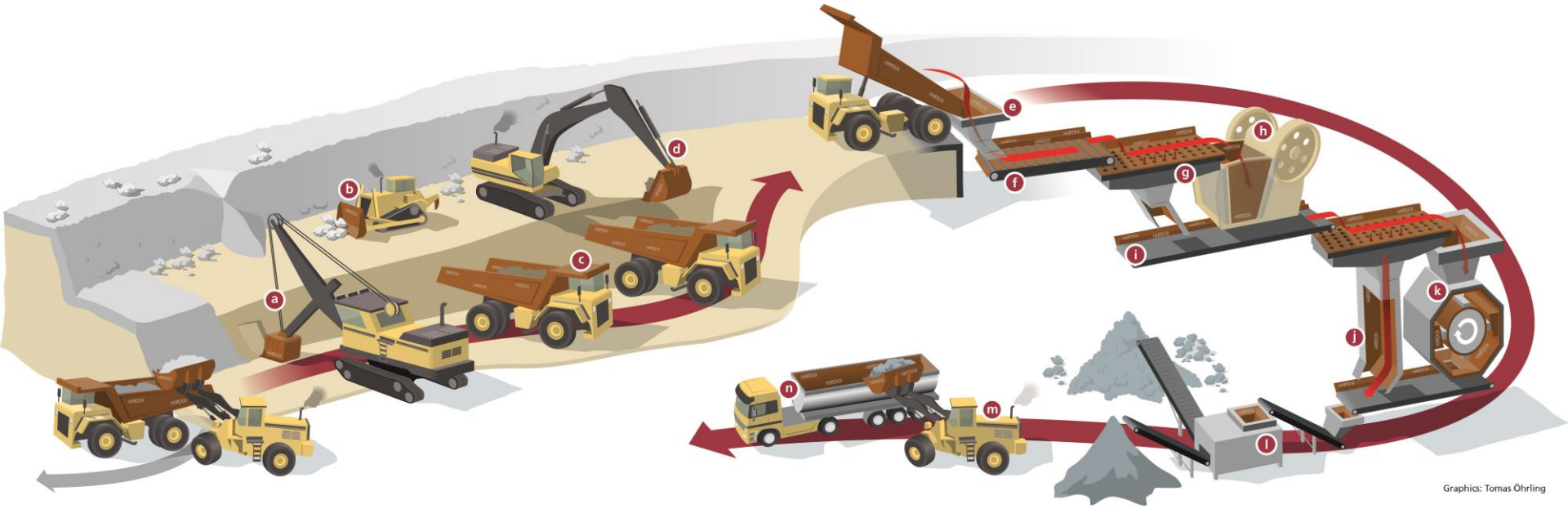
open pit

Hardox wearplates:



✓ Machine- and Bendable

✓ WearCalc™ for choosing the correct protection



HARDOX® WEAR PLATE

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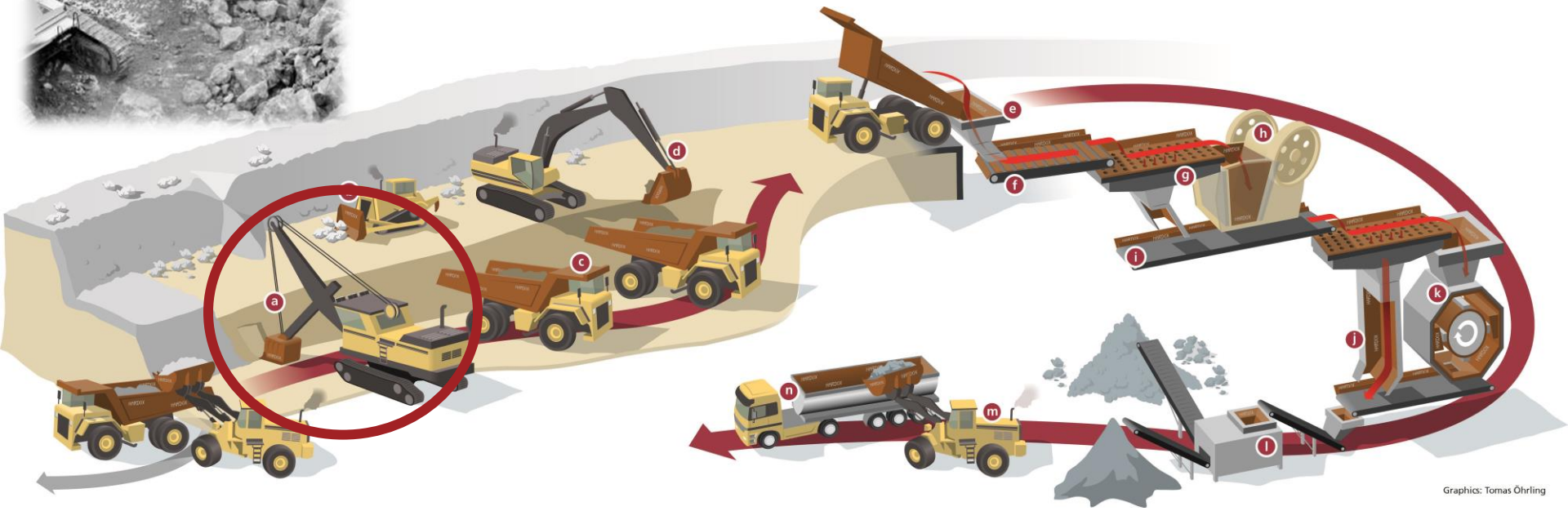
SHOVEL

Shovel bucket structures can be built with Hardox 400/450. Hardox HiTuf is recommended for cutting edges while Hardox 500/550 are ideal for bucket cheek plates.



Graphics: Tomas Öhrling

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DUMP POCKET

At the discharge site, use Hardox 400/450/500 to line dump pockets.

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HOPPER & FEEDER

Hardox 500/550/600 are right choice for hoppers and feeders.

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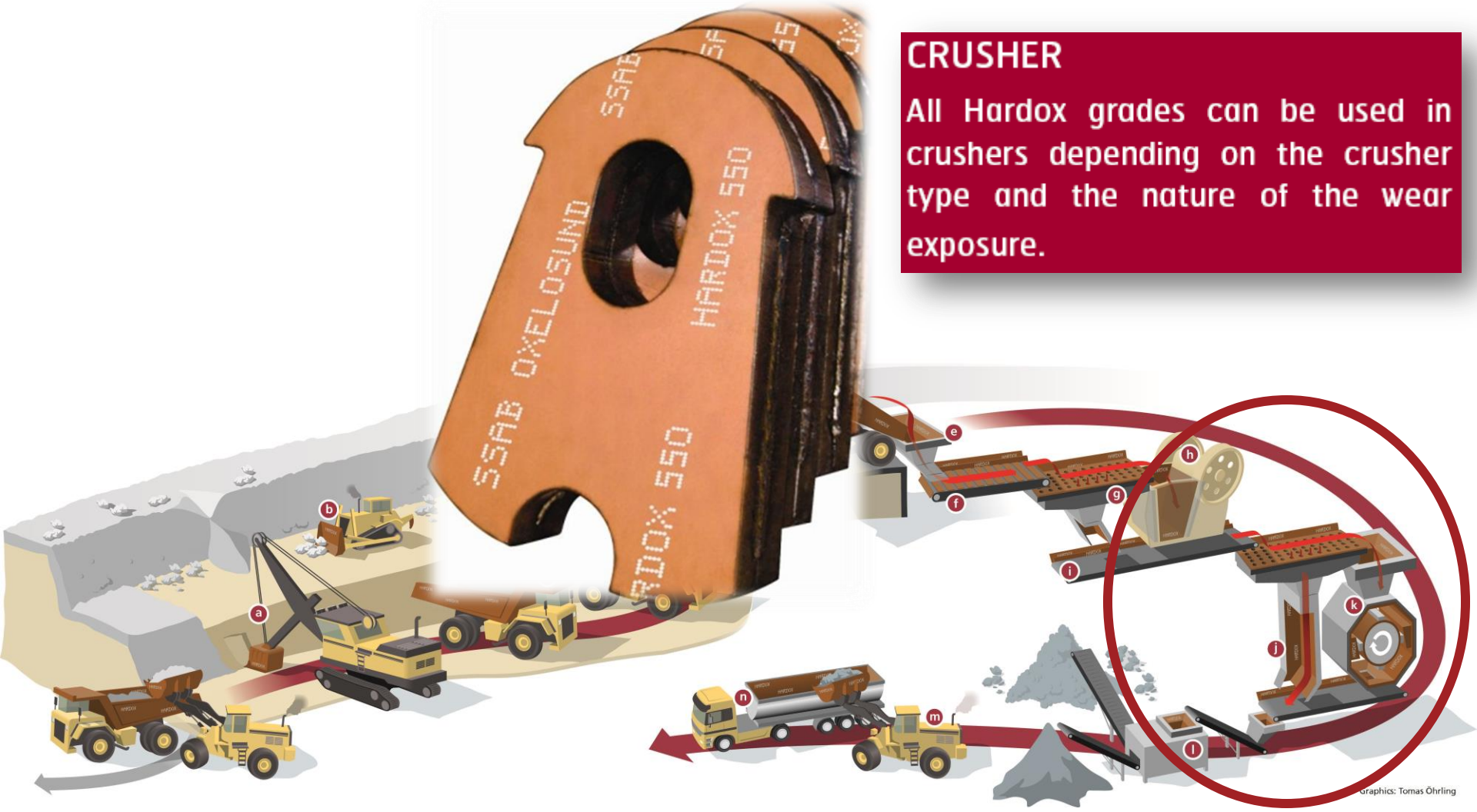

CRUSHER

All Hardox grades can be used in crushers depending on the crusher type and the nature of the wear exposure.

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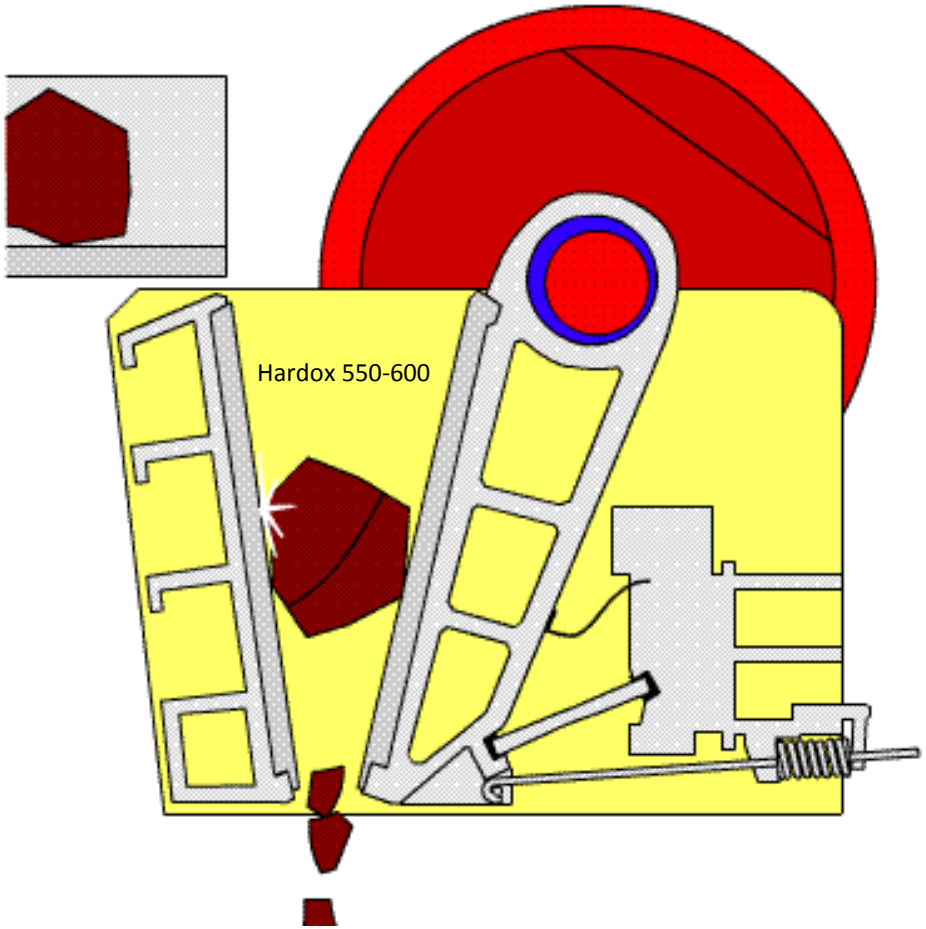
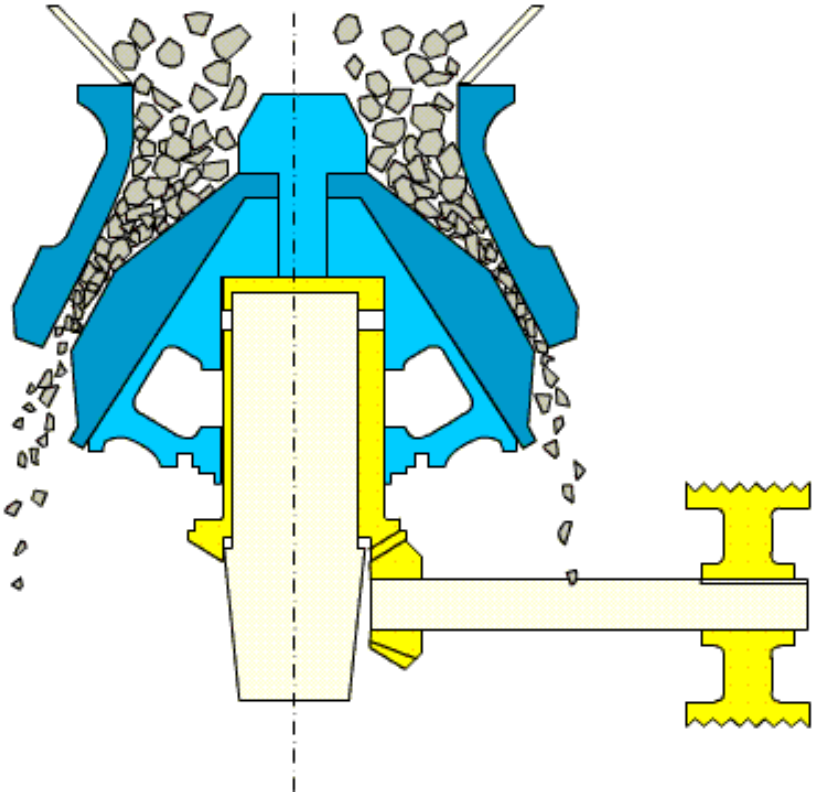
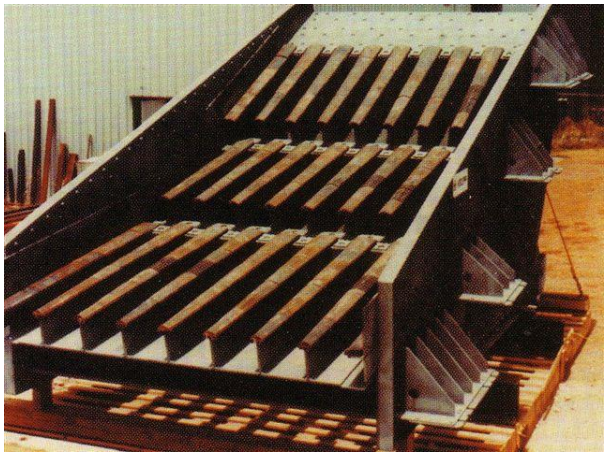
Primary crusher-Jaw crusher



Secondary crusher-cone crusher



Grizzly bars made by Hardox 500



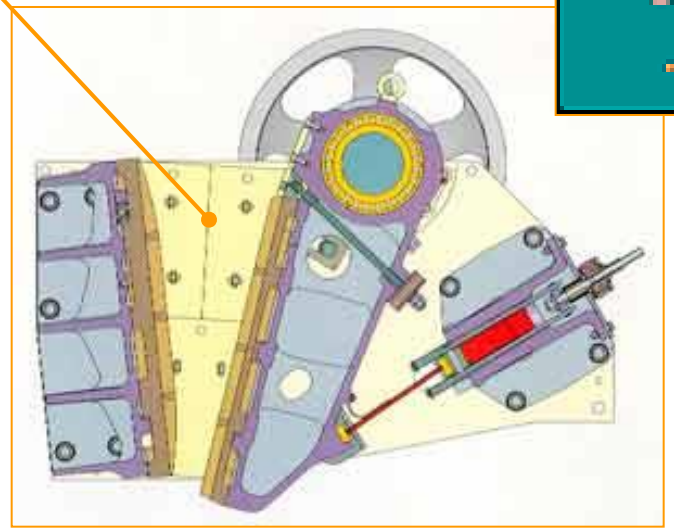
Crusher Feeder & Chute

- Feeder and Hopper to the primary crusher.
- Liner plates in HARDOX 400-600

Jaw crusher

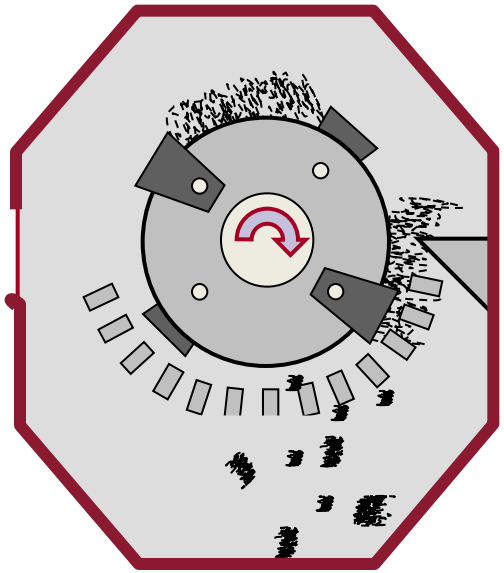
- Linear plates in HARDOX 550 or HARDOX 600 in wedges

-Hardox 550 has proven to double the life time compared to Mn casting or Hardox 500



- impact wear resistance,
- sliding wear resistance,
- toughness,

-> HARDOX 550-600



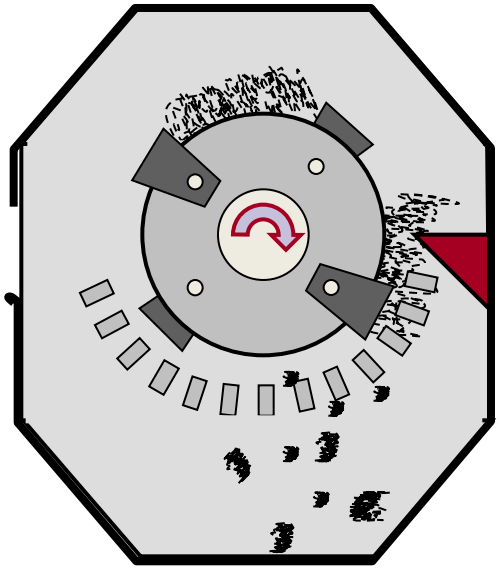
Crusher body

- impact wear resistance,

- bendability,

- weldability

-> HARDOX 450



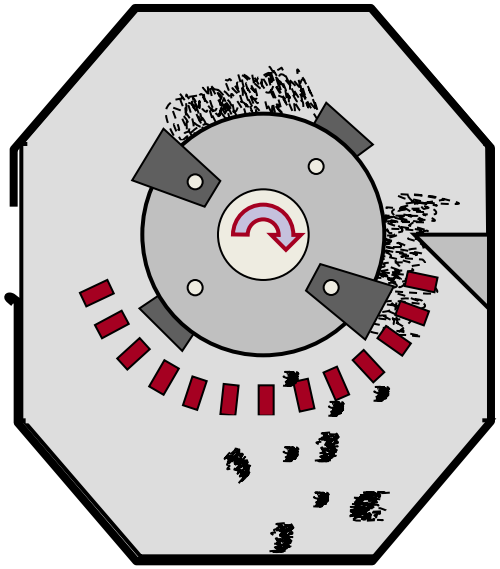
Anvils

- sliding wear resistance,

- weldability,

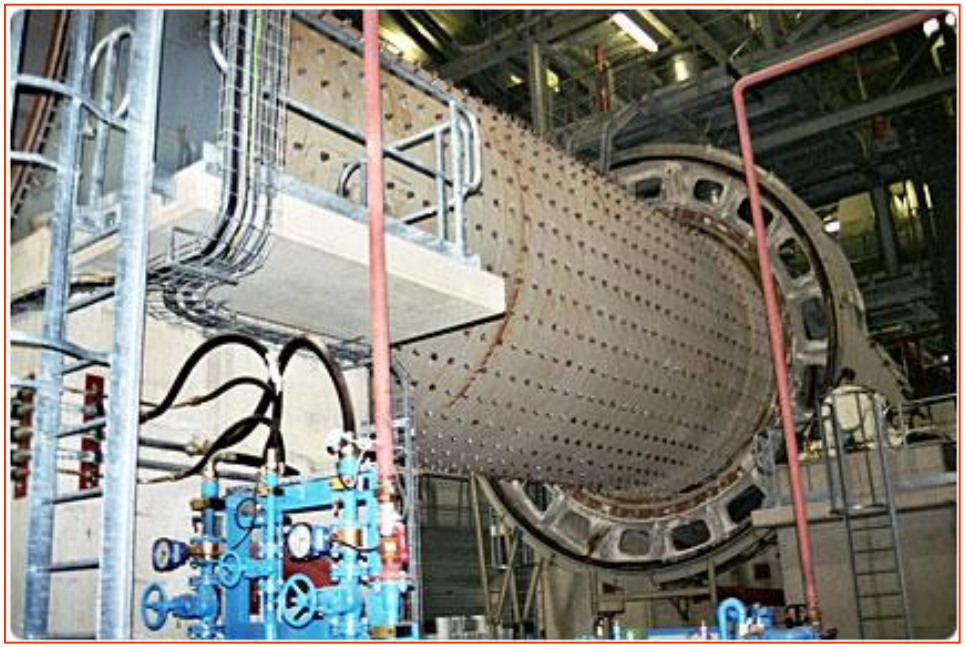
-> HARDOX 500

Gryzzly bars in the secondary crusher



Breakage is common in both segments and wear bars, both usually made out of 12 %Mn-steels. With HARDOX 500, breakage is minimized and wear life increased

Ball mill



Wear protection at inlet and outlet chutes

HARDOX 500

HARDOX 550

Pipes made by 8 mm Hardox 400

Industry segment
Mining & Quarry

Competitive advantage
Workshop properties

Volume
3 tons per year

Manufacturing steps
Cutting method - Gas cutting; Bending method - Roll bending

Status
Success

Reason for success
Good workshop-properties + high lifetime.

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Primary quarry feeder

Steel grade
Hardox 450

Thickness range
6 to 10 mm

Industry segment
Mining & Quarry

Type of application
Feeder

Description of the application
8mm Hardox 450 liner plates.
Feeder rate 600 tones per hour into 1200 mm wide jaw crusher.

Manufacturing steps
Cutting method - Gas cutting;

Status
Success

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Liner to chute

Thickness range
10 to 30 mm

Industry segment
Mining & Quarry

Description of the application
Hardox 550-40mm. Thick Scalper sort big rocks from fine ore to feed Jaw crusher. Side liners Hardox 500-16mm.

Previous material
Local 500 BHN

Manufacturing steps
Cutting method - Gas cutting

Status
Success

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Screen

Steel grade
Hardox 400

Thickness range
3 to 6 mm

Industry segment
Mining & Quarry

Description of the application
Laser cutted, bended and welded.

Competitive advantage
Service life

Manufacturing steps
Cutting method - Laser cutting;
Bending method - Roll bending;
Welding method - MAG

Status
Success

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Screen made by Hardox 500

Steel grade
Hardox 500

Thickness range
10 to 30 mm

Industry segment
Mining & Quarry

Description of the application
Bars for screening of iron ore made from Hardox 500, 20 mm.

Manufacturing steps
Cutting method - Gas cutting;
Cutting method - Plasma cutting

Status
Success

Reason for failure or success
Longer lifetime than the ones made from 12% Mn-steel

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Lining with stud welding

Steel grade
Hardox 500

Thickness range
60 to 90 mm

Industry segment
Mining & Quarry

Type of application
Lining in crusher

Manufacturing steps
Cutting method - Gas cutting;
Welding method - Stud welding

Status
Success

Comments
Bolts M20, bolts material 4.8 (ca 160 HV). Each bolt tested by tensile test for 150 % of tightening torque. The drilling/machining shown on the picture is just test. The real lining plates were just stud welded.


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