KOPAR

100% Committed to Hot & Abrasive

General Presentation /
Kopar Cooling Drum

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KOPAR IN SHORT

- 100% Committed to Hot and Abbrasive Process Systems
- Globally more than 10 000 operating equipment In Heavy Industries
- Complete Systems with Engineering, Supply and Construction.
- European Manufacturing in Parkano, Lehtimäki and Rakvere.
- Works in according ISO9001, ISO14001, ISO18001, ISO3834, EN1090 (certified up to EXC4).
- 10

KOPAR SOLUTIONS

Energy

Metallurgy

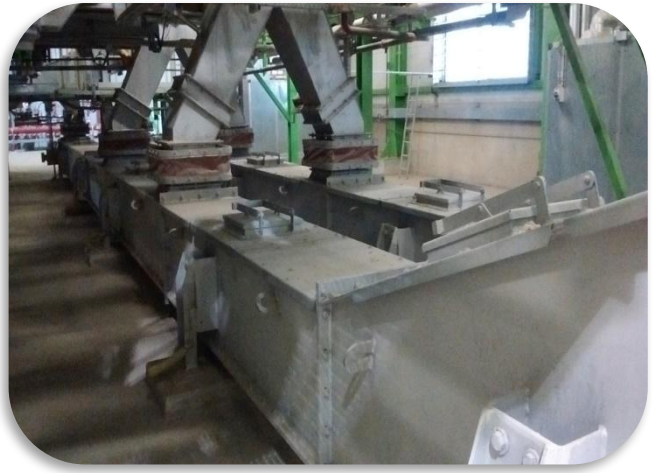
Chemical

KOPAR TECHNOLOGY

ROBUST & PURPOSE BUILT SYSTEMS

- **Lowest Cost / Transported Ton**
  - Purpose Built, Optimized Equipment
  - Longer Lifetime of the Equipment
  - Lower operating and service labor cost
  - Lowest Energy Cost/Transported ton

- **Ease of Operation and Maintenance**
  - Simple robust designs
  - Little Moving Part
  - Easy Maintenance



- **Environmentally Sustainable Solutions**
  - Longer Service Interval
  - Lower Energy Consumption
  - Longer System Lifetime

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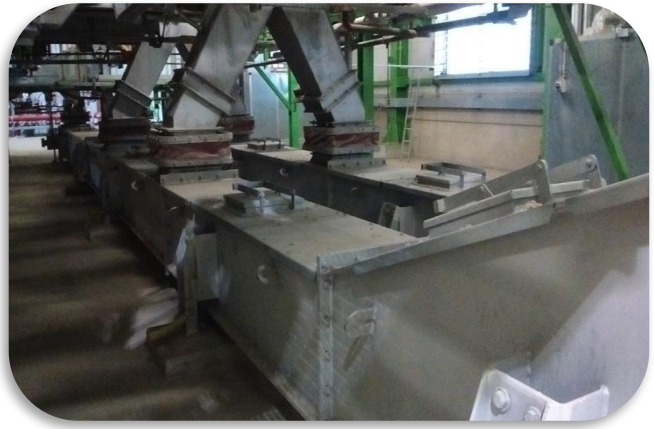
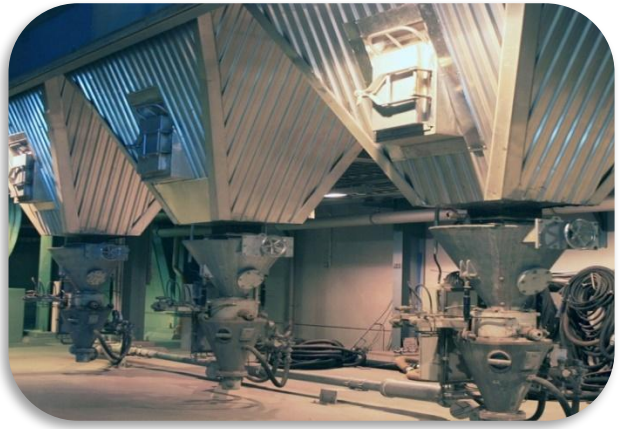
KOPAR TECHNOLOGIES

MECHANICAL

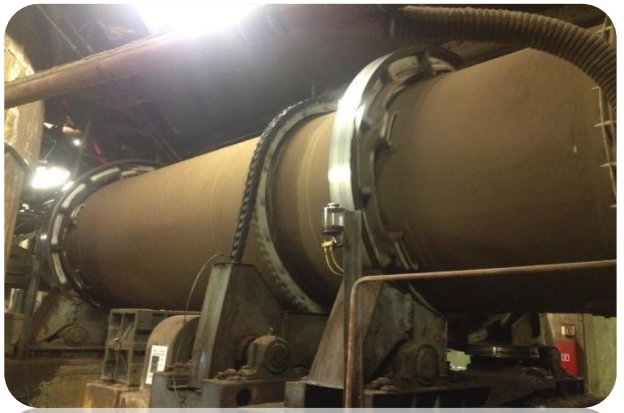


PNEUMATIC



STORAGE

COOLERS & DRYERS



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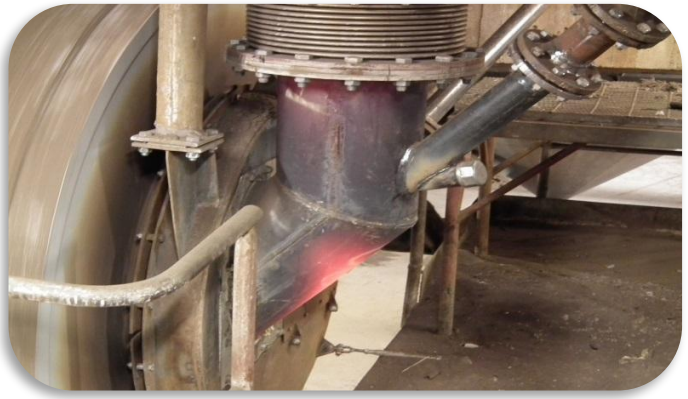
COOLING AND DRYING

KOPAR COOLING DRUM



- Calculated and dimensioned always individually for each project
- Cooling for free-flowing bulk materials
- Material inlet temperatures up to over **900** degrees C
- Material outlet temperatures even below **100** degrees C depending on the application
- Capacity more than **50** tons/h depending on the application

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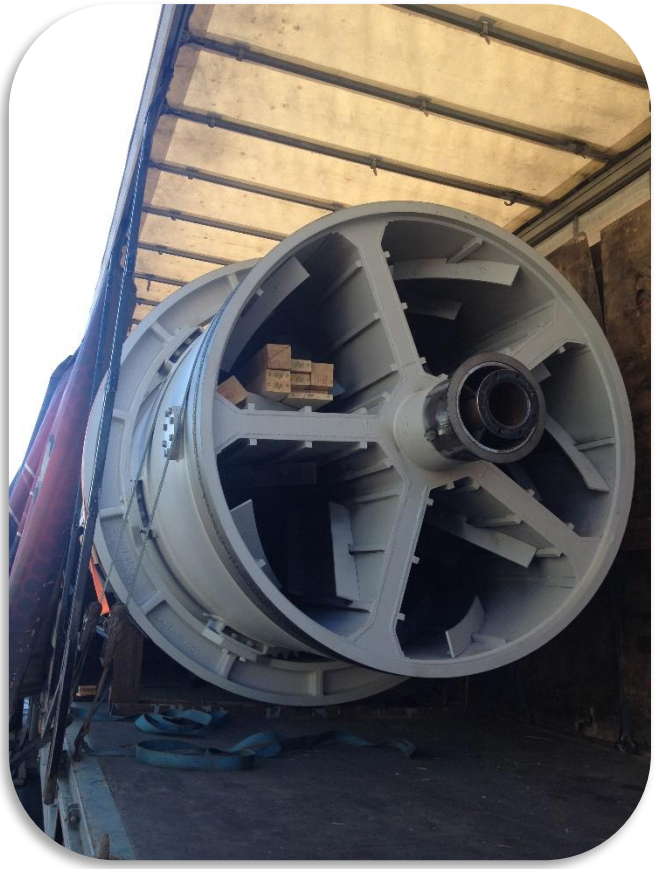
COOLING AND DRYING

KOPAR COOLING DRUM

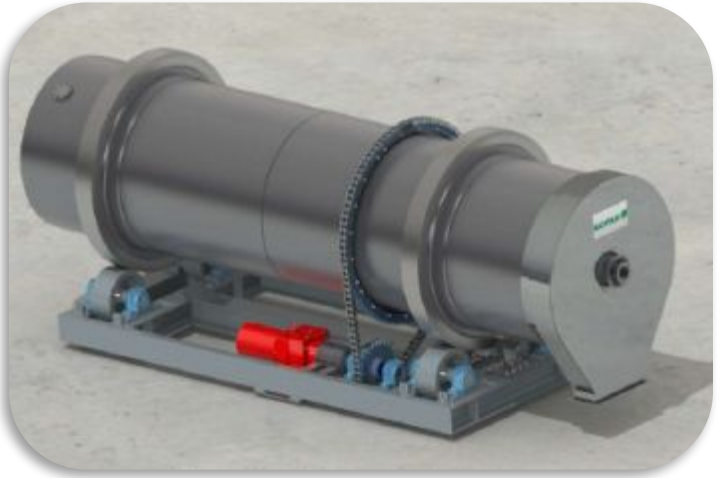
- Various design for internal lifters in the product chambers to ensure proper mixing and conveying of the product
- Drive through chain or girth gear depending the size of the unit
- Counter flow design to maximise the cooling power and efficiency
- Unpressurized non PED regulated system ensures cost efficient operation and maintenance
- Components designed to fit into the standard sea container for transportation

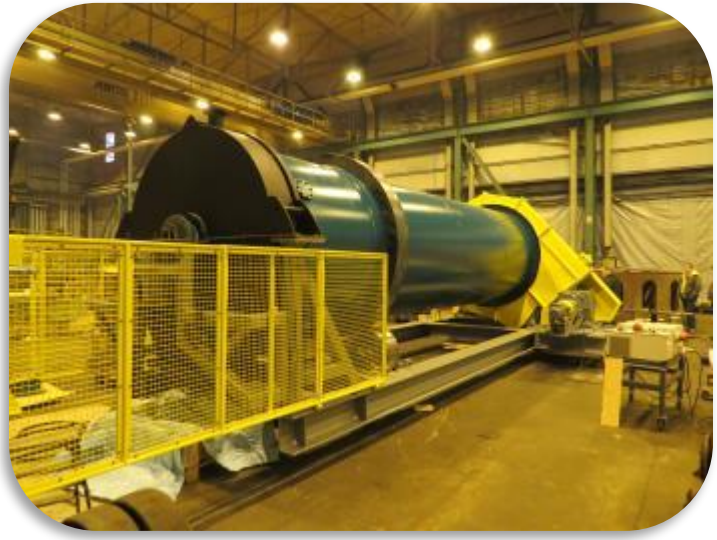


Kopar reference case – KGHM, Glogow HMG I

Cooling drum for metallurgical dust

- Complete delivery and design calculations for the indirect type rotary cooler
- Capacity: 20 t/h
- Inlet temperature: 460 C
- Outlet max. : 130 C
- Completely FAT tested before delivery including drive equipment
- To be commissioned 2017





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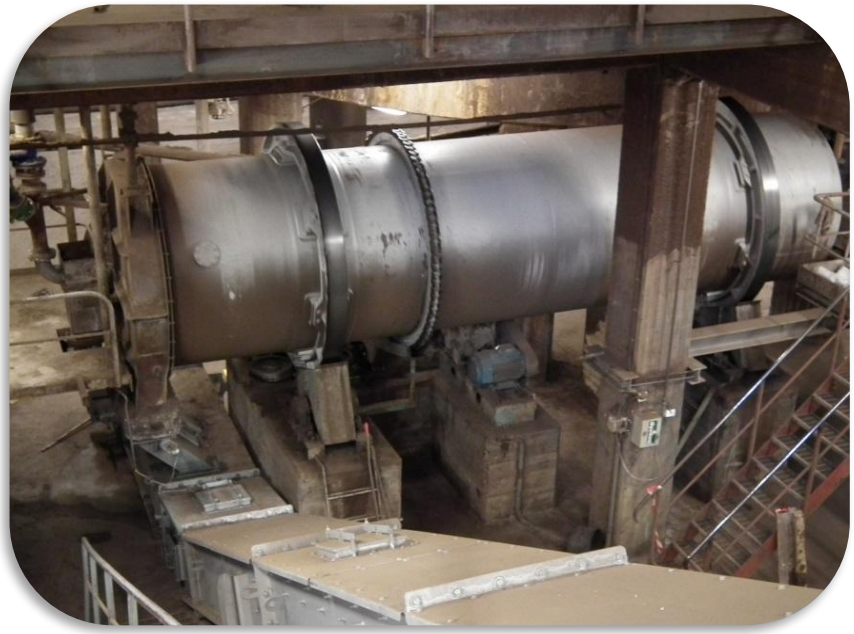
Kopar reference case – Boliden Odda

Calcine cooling drum

- Complete delivery, design and assembly for the indirect type rotary cooler
- Capacity: 22 t/h
- Inlet temperature: 900 C
- Outlet max. : 200 C
- Commissioned 2013



Kopar deliveries worldwide

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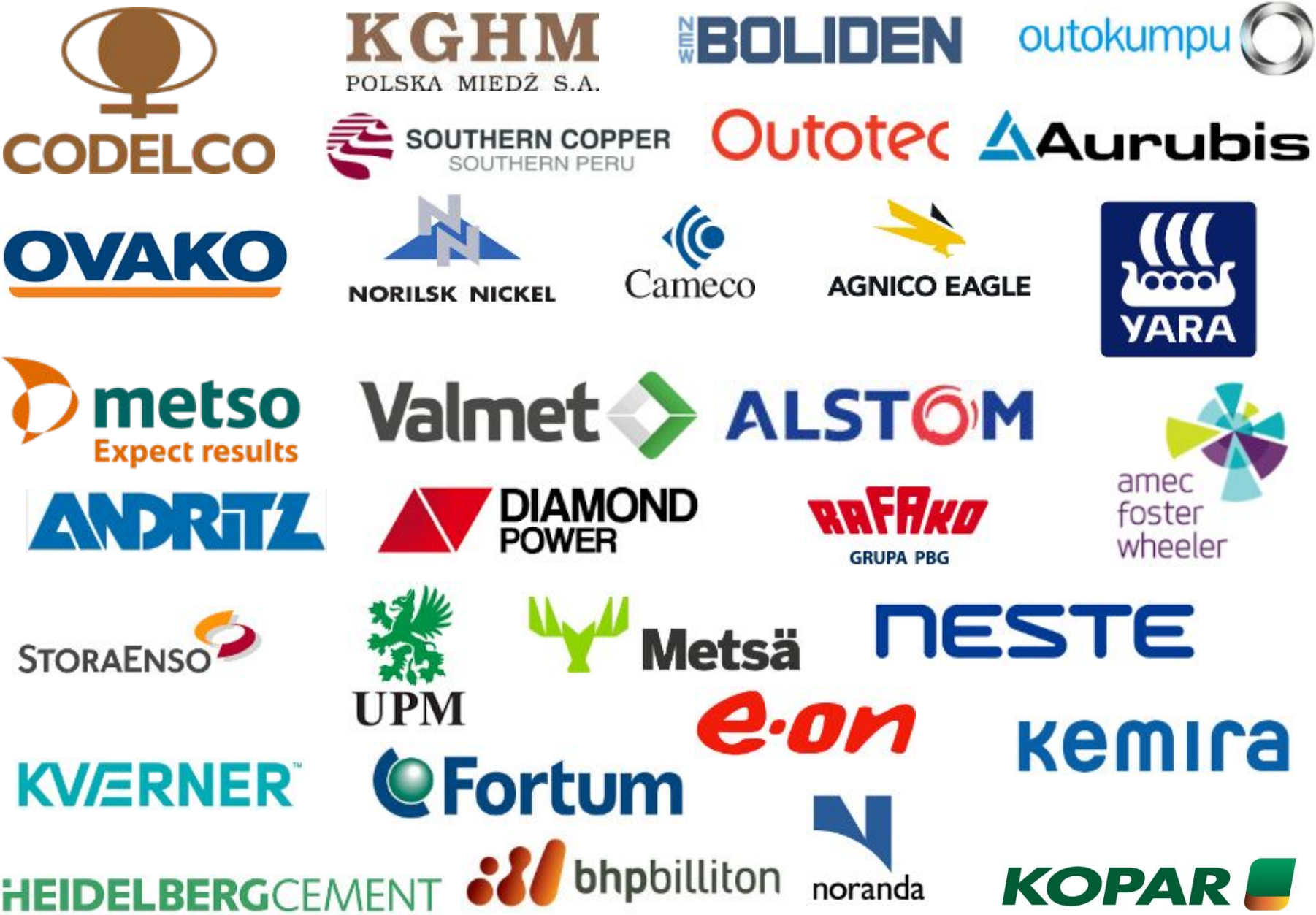
REFERENCES


CODELCO
KGHM
POLSKA MIEDŹ S.A.
BOLIDEN
outokumpu
SOUTHERN COPPER
SOUTHERN PERU
Outotec
Aurubis
OVAKO
NORILSK NICKEL
Cameco
AGNICO EAGLE
YARA
metso
Expect results
Valmet
ALSTOM
amec
foster
wheeler
ANDRITZ
DIAMOND
POWER
RAFAKO
GRUPA PBG
STORAENSO
UPM
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KVÆRNER
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Experience. Reliability.

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