



Stabilisation of metallic Mercury

First feedback EU / EFTA

REMONDIS QR

The
Mercury
Expert



Part of the RETHMANN Group

A family-owned corporation



Environmental & Technical Services



▪ Metals



▪ Water



▪ Services



▪ Recycling

TURNOVER 2018



▪ apprx. 6,400m euros



▪ apprx. 31,200 employees

REMONDIS QR, Germany

The Group's mercury specialist

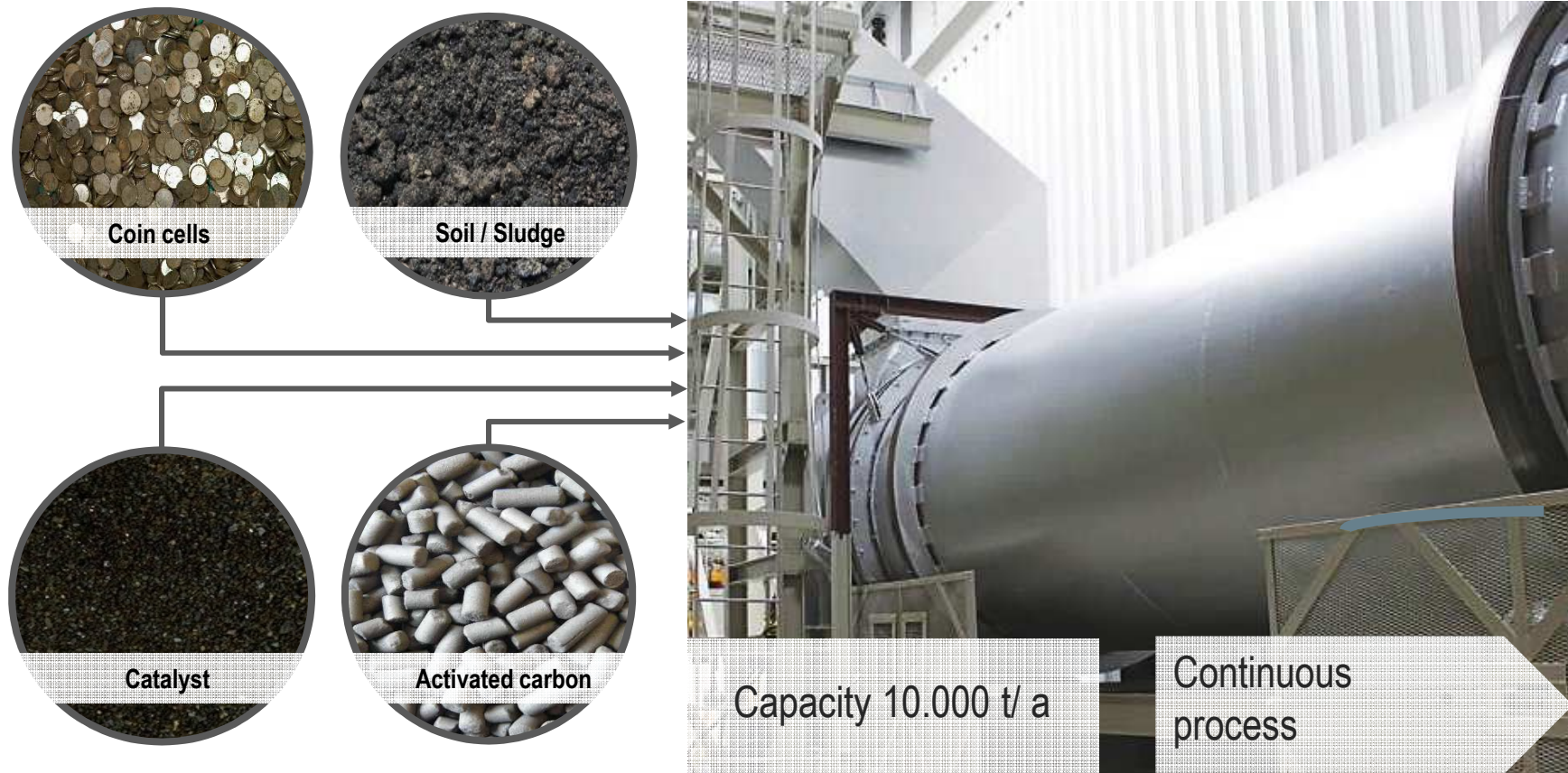
- Certified „Specialized Waste Management Company“
- Established in 1989 (as NQR GmbH)

- Dorsten (our main site)
 - 2 plants for mercury treatment:
 - Rotary kiln
 - Vacuum mixer (Hg → HgS)
 - 3rd plant currently in assembling:
 - Vacuum tube kiln

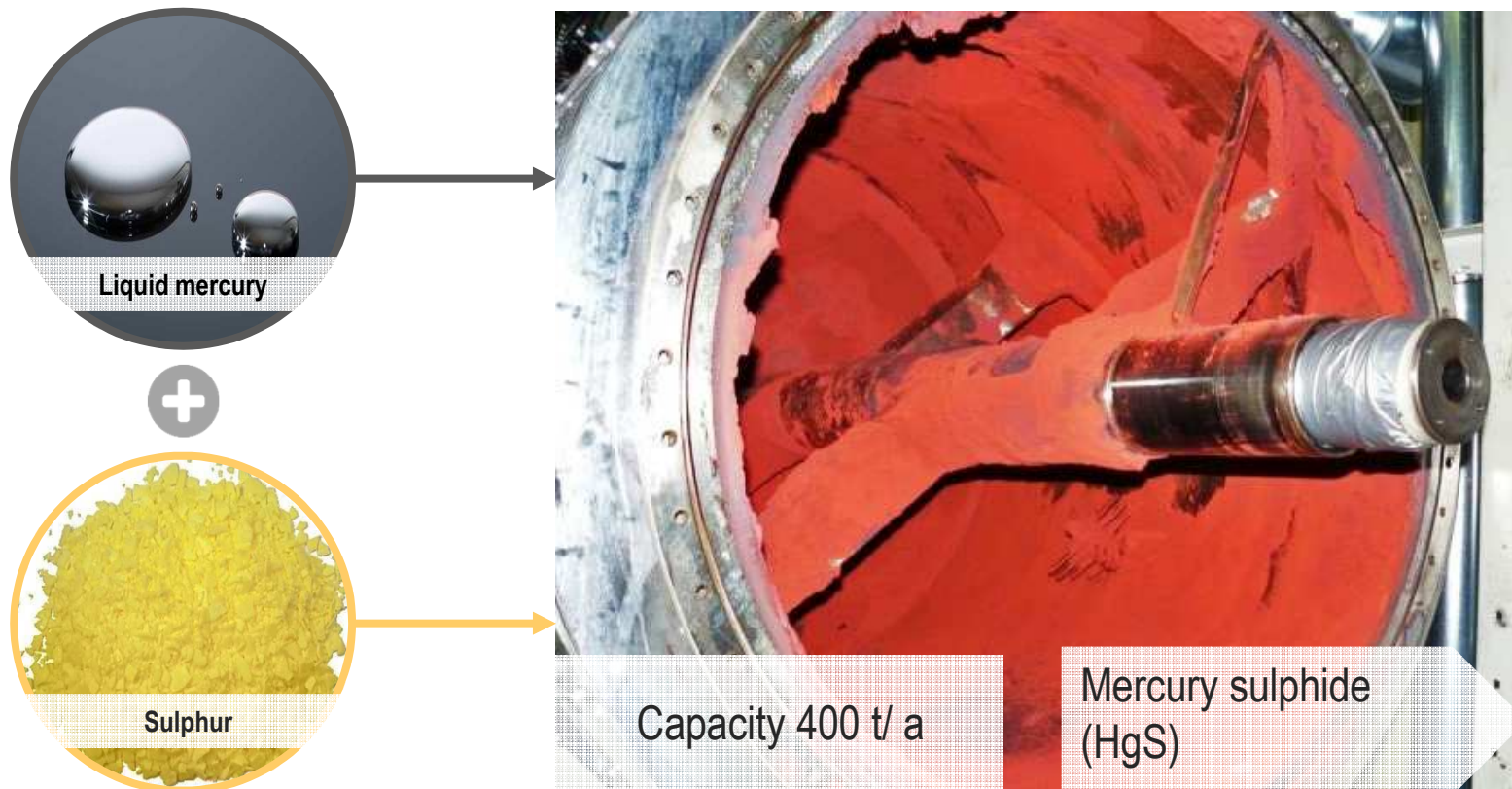


Rotary Kiln (Dorsten site)

Distillation of mercury contaminated waste



Vacuum Mixer (Dorsten site) Stabilization of liquid mercury



Box kiln (Lübeck site)

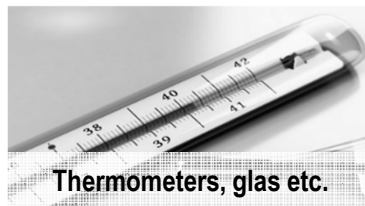
Distillation of mercury contaminated waste



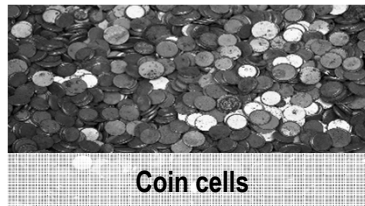
Scrap metal



Amalgam



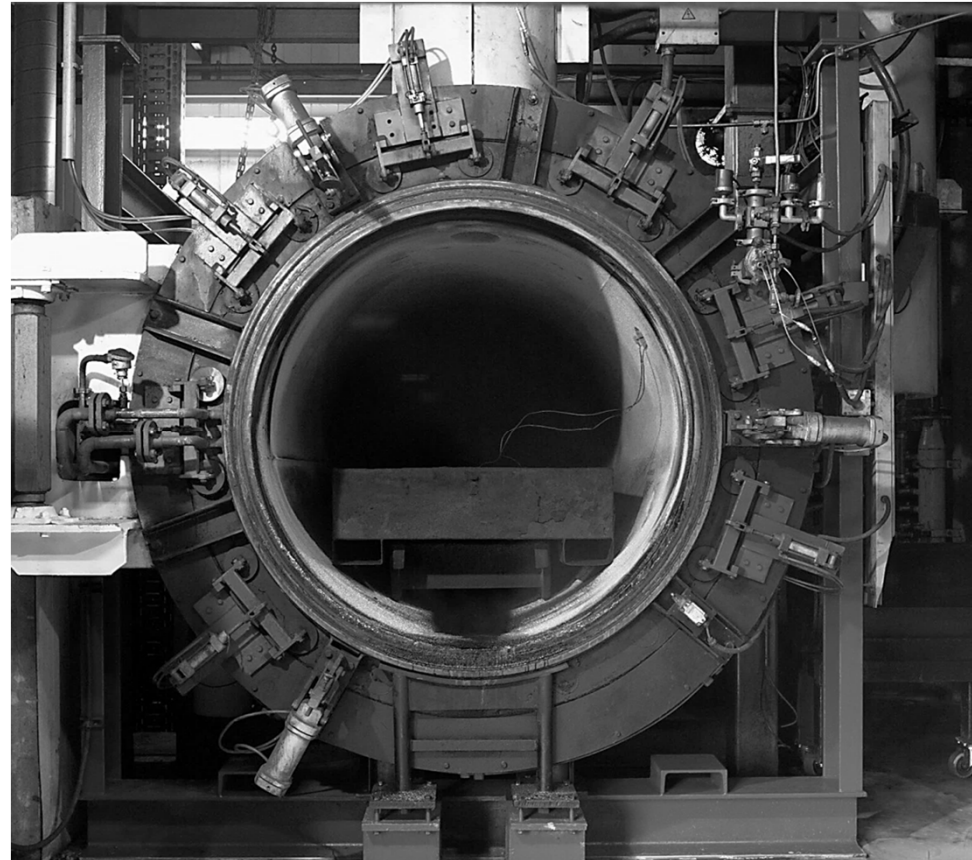
Thermometers, glass etc.



Coin cells

Batch process

Capacity
< 300 t/a



REMONDIS QR, Germany

Types of mercury waste & sites



DORSTEN

- Soil, sludge, spent absorbents (catalysts, carbon)
- Pumpable waste (with hydrocarbon, flash point)
- Metallic mercury (Hg)



LÜBECK

- Batteries
- switches, relays, thermometers, electronic waste, , lamps, rectifiers etc.
- dental amalgam
- scrap metal

Sectors – Who were our customers? 2014 - 2019

- Chemical Industry
- Oil & Gas Sector
- Mining Companies
- Waste management Companies
- NGOs

Regions – Where did the waste come from? 2014 - 2019

- Industrialized Countries → Largest part of business carried out.
- Less industrialized Countries → Several projects successfully realised.
- Developing Countries → First projects are running, one project successfully realised.

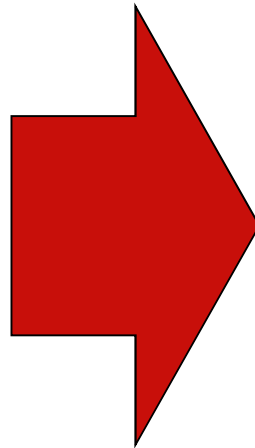
Quantities – How much metallic Hg and Hg-contaminated waste? 2014 - 2019

- Biggest project with Hg-contaminated waste: approx. 800 mt (Oil & Gas Sector).
- Biggest project with stabilisation of metallic Hg: approx. 350 mt (Chemical Industry)
- Several bigger projects in Chemical Industry with 50 – 300 mt.
- Most of the projects are smaller – with less than 40 mt per Basel Permit.
- And in the future we will face more and more projects with less than 1 mt

Smallest quantities – will occur more often!

2014 - 2019

- like this one:
 - 11 kgs of metallic Hg, in 60L drum
 - from a waste management company
 - from a less industrialized country



- Where is the market for the treatment of mercury waste heading to?

Challenges for the future!

2020 - 2030

- ... more smaller and smallest projects
- ... will arise more and more in less industrialized and developing countries
- ... with small budgets for founding of such project



Thank you for your attention!



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