

Zero industrial waste ... !

econ 
INDUSTRIES

On-site mercury conversion

The traceable and economic solution
for mercury disposal



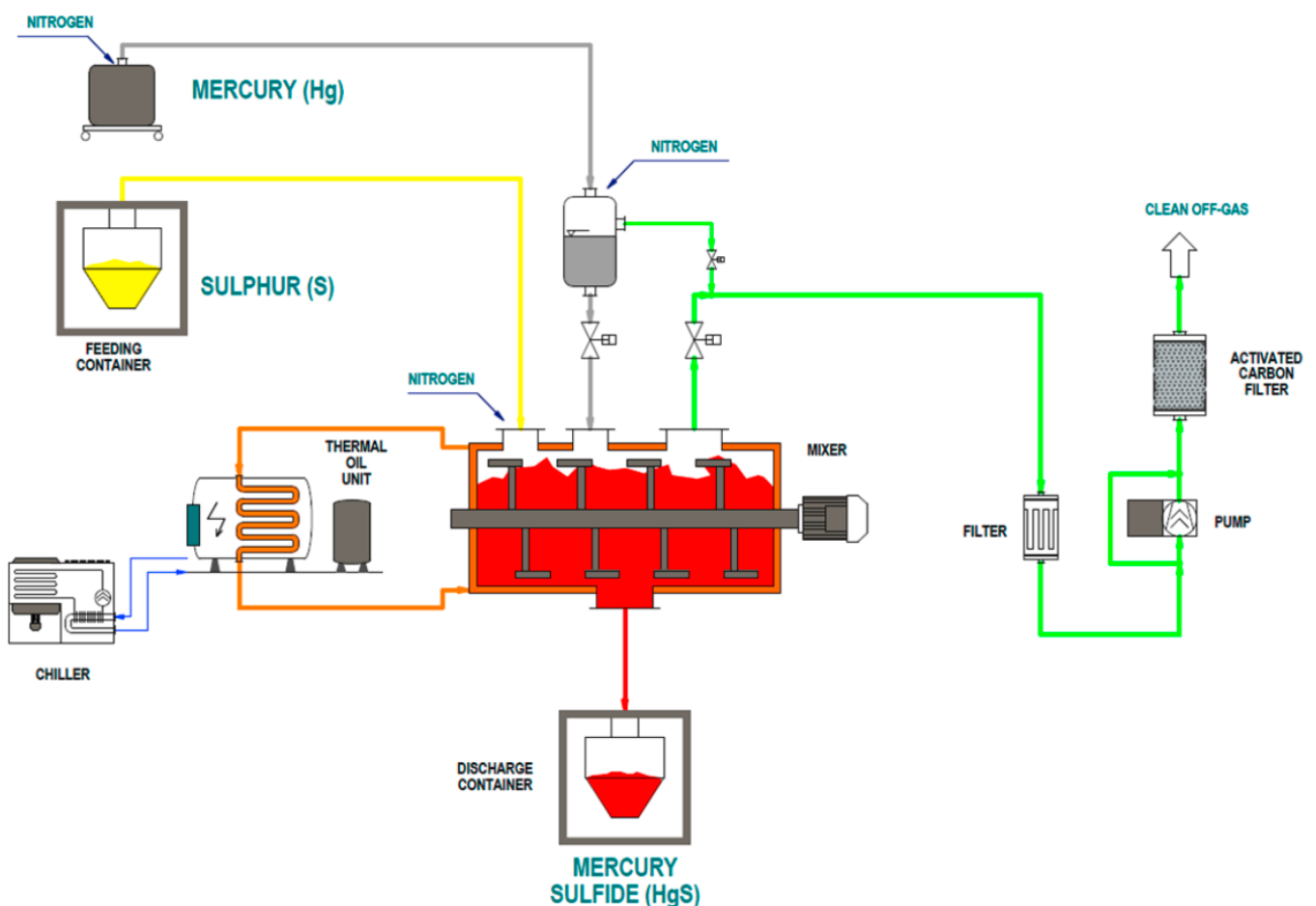
www.econindustries.com

The mercury conversion process

Strict legal requirements and corporate responsibility require a traceable disposal solution for surplus mercury. EU-export ban and scandals about illegal exported mercury prompted the major chlor-alkali companies to ask for a mercury disposal procedure guaranteeing full control of the mercury whereabouts down to the final disposal.

Econ industries answered this call and developed an on-site mercury conversion process allowing mercury conversion and final disposal – all under full control and traceability of the waste owning company.

Under nitrogen atmosphere liquid mercury and sulphur powder react in a safe and hermetically closed reactor. Continuous, intensive mixing during the process ensures complete stoichiometric reaction of mercury and sulphur.



Technical key facts

- › Start of operation: Successfully started in February 2018
- › Conversion capacity: minimum 4 tons per day
- › Process supervision and responsibility: econ industries supervisor on-site
- › Plant mobilisation time: one week

Complete solution from one source

Legal compliance

- › one single on-site process step resulting in HgS for safe disposal
- › 100 % traceability guaranteed installation to mercury removal
- › ‚disappearance‘ of metallic mercury impossible
- › third party supervision by certifying body welcome

Lowest price

- › fair, comprehensible pricing
- › on-site utilities and energy provided by customer at real costs
- › the shortest way to final disposal: no overheads for involvement of waste management company
- › no transboundary movement of mercury, no interim transport, no certified Hg transport containers required

MERCURY



SULPHUR



The mercury conversion process



RED MERCURY
SULPHIDE

Final product

- | | |
|-------------------------------|---------------------------------|
| › Quality: | Pure red mercury sulphide (HgS) |
| › Mercury conversion rate: | > 99.999 % |
| › Water content: | < 0.5 % |
| › Final underground disposal: | Product approved by K+S & GSES |

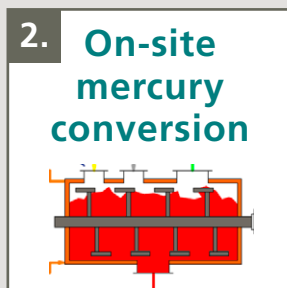
Site conditions

- › minimum 50 tons of metallic mercury
- › 200 m² workspace, Electrical power supply up to 120 kW
- › Utilization of client staff possible
- › Operating permit, with econ's support

Zero industrial waste ... !

Traceability during the whole process

Surplus mercury from chlor-alkali industry, gas industry, etc. to be **safely disposed**.



On-site mercury conversion to pure red HgS by mobile unit.

The pure HgS **meets all acceptance criteria** for disposal in salt mines.



Quality control is executed by econ. Client or third party **control is possible at any time**.



Pure dry HgS powder is packed in certified UN drums.

The HgS is transported to salt mines for final disposal (usually K+S or GSES). **Regulations** for transboundary waste shipment and dangerous good transports are **fulfilled**.



The salt mines perform **quality check** of the material and the HgS drums are permanently stored in underground disposal sites.

The salt mine issues **proof of waste disposal**.

Zero industrial waste ... !

econ 
INDUSTRIES

Since more than 15 years econ industries also provides on-site solutions for the safe separation of mercury from contaminated soils and sludge, based on vacuum-distillation and our renowned and patented VacuDry® technology.

Learn more about this on www.econindustries.com

econ industries
Schiffbauerweg 1
82319 Starnberg, Germany
info@econindustries.com



phone +49 8151 446377-0