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

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
Traceability during the whole process

1. Mercury

2. On-site mercury conversion
   - On-site mercury conversion to pure red HgS by mobile unit.
   - The pure HgS meets all acceptance criteria for disposal in salt mines.

3. Quality Control
   - Quality control is executed by econ. Client or third party control is possible at any time.

4. Packing & transport
   - 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.

5. Final disposal
   - 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.

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

Zero industrial waste ...!
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](http://www.econindustries.com)