

Fact Sheet

Mercury waste treatment centre - removal, recovery and stabilisation of mercury



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Zero industrial waste ... !

Mercury waste treatment centre

Catalysts, filter cakes, activated carbon, drill cuttings, contaminated soil

econ industries is the only company worldwide, offering a complete mercury waste recovery and treatment centre for processing all types of mercury waste on an industrial scale. The econ industries Hg centre provides the safest and most environmentally friendly method of mercury waste recovery and treatment.

The econ industries Hg centres consist of the following main units:

econ VacuDry® - Vacuum Distillation Unit: The VacuDry® process is a specially designed vacuum distillation. The material is continuously mixed and heated under controlled vacuum to safely evaporate water, hydrocarbons and mercury. This unit can be utilized for all waste streams containing metallic mercury and mercury compounds with a boiling point of up to 450 °C. Typical waste streams treated are NORM waste, drill cuttings, filter cakes as well as mercury contaminated soils and sludges.

econ High Temperature Treatment Unit (HTTU): The econ HTTU is utilized where catalysts from the oil and gas industry, activated carbon, and all wastes containing mercury sulfide (HgS) and Mercury (II) Chloride (HgCl₂) are to be treated. To increase the throughput capacity of the HTTU the feed material is pre-treated in a first step in the VacuDry® unit, to remove water and hydrocarbons. In the high temperature oxidizing (roasting) process the material is continuously mixed and heated up to 800 °C. During this step Mercury compounds like HgS and HgCl₂ are decomposed. Mercury is recovered as metallic mercury. Hydrocarbons and sulfur are oxidized. The formed acidic off-gas is neutralized in an alkaline scrubber. The resulting solid output material is free of mercury and contains > 99 % pure mineral/metallic solids.

econ mercury stabilisation unit: If required mercury is converted to cinnabar (HgS) in a specially designed reactor. The very stable and non-toxic cinnabar is packed into drums and disposed of in secured underground disposal facilities.

econ mercury purification unit: Where mercury shall be recovered for reuse a high mercury quality is required. Econ utilizes a special vacuum distillation at high vacuum to produce metallic mercury with a purity of > 99.999 %.

Key facts

- Typical throughput capacity: 0.2—5 t/h
- Input material: All waste streams containing mercury or mercury compounds
- Unit design: Fixed installation or mobile
- Scope of supply: turn-key machinery, organisational set up and complete project cycle supervision



Mercury contaminated soil.



VacuDry® plant.



Recovered Mercury.

Greatest benefits

- High flexibility—Every mercury waste stream can be treated
- Safest technology – Due to closed vacuum system
- Technologies of the world market leaders of mercury recycling
- Turn-key solution—including setup of material handling and safety regulations