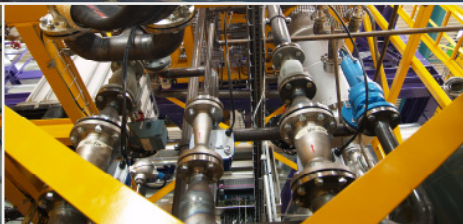


Fact Sheet

VacuDry® zerofuel **The energy-efficient** **solution for drill cuttings** **and contaminated soil**



econ industries

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Imagine – Zero industrial waste ... !

Vacuum distillation heated by recovered oil

Energy efficient, resource conserving and sustainable

During drilling operations huge amounts of oil sludge, drill cuttings and oil contaminated soils are produced. Often these wastes are stored near the drilling rig for many years and finally have to be treated and/or disposed of professionally. The latest development at econ industries is an environmentally friendly, energy self-sufficient and very cost-effective technology for the treatment of these wastes.

The combination of the well-proven econ VacuDry® technology with the innovative recycling of the separated crude oil fraction is particularly suitable for bigger plants with throughput capacities of more than 10 tons per hour. In these plants, which amongst others are equipped with 4 VacuDry® dryers, oily wastes can be treated in a CO₂ neutral and resource-conserving way.

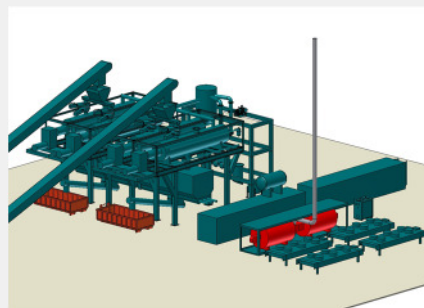
In the dryers the input material is heated up to 400 °C by means of thermal oil and is treated under vacuum. The first step in this process is the vaporisation of the water. The vaporisable hydrocarbons are condensed separately, treated and are used for heating of the thermal oil. Optionally the electricity supply can also be realized by using the recovered oil. By not relying on external energy sources a complete amortisation of the investment costs is possible within a very short period, especially because the plant is independent of the current development of the energy prices. In the VacuDry® process more than 95 % of the hydrocarbons in the input material are separated. That is why, according to applicable regulations, the cleaned mineral solids can be disposed of without any special requirements.

Key facts

■ Input material:	Oily sludge and waste with hydrocarbon contents > 10%
■ Plant capacity:	> 10 t/h throughput capacity with 4 VacuDry® evaporators
■ Fuel source:	Recovered waste oil; no light fuel oil or natural gas required
■ Heating system:	Indirect thermal oil with temperatures up to 400 °C
■ Available evaporation ranges:	Boiling points up to 450 °C are achieved under vacuum < 50 mbar abs
■ Solids output:	Clean minerals with hydrocarbon contents below 0.5%



Condensation unit of VacuDry® plant



3D Modell of the VacuDry@zerofuel plant



VacuDry® 12,000 dryer

Greatest benefits of the VacuDry® zerofuel technology

- Energy-efficient because of the reuse of the recovered oil; no external fuel source required
- Economic operation fully independent of rising energy prices
- Thermal reuse of the recovered oil for energy production according to newest European emission regulations
- Emission and dust free system via enclosed treatment of exhaust vapours and solids
- ATEX certified technology, approved by German TÜV
- Design standards according to EN, ASME, GOST-R or individual specifications available
- 7,000 operating hours per year guaranteed, 24 hours operation, availability > 90%