econ INDUSTRIES

Case Study

Oil recovery from various oil contaminated soils and wastes





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Zero industrial waste … !

Oil recovery from various oily waste and soils

by econ industries VacuDry® vacuum distillation

A waste management company from Australia was looking for an environmentally friendly solution for oily waste with low emissions and a low carbon foot print. To save installation and commissioning time econ realized a preinstalled modular VacuDry® unit with a capacity of up to 6 tons/hr. The plant is designed for maximum flexibility and it is able to treat different types of refinery waste ranging from dry soil to wet centrifuge cake.

The VacuDry® plant is equipped with two VacuDry® 12,000 dryers. The input material mainly contains diverse hydrocarbon fractions from various sources. After separation the recovered oil can be sold to the refinery or it can be reused. The cleaned mineral residues have a hydrocarbon concentration (C6-C36) of less than 0.5 percent.

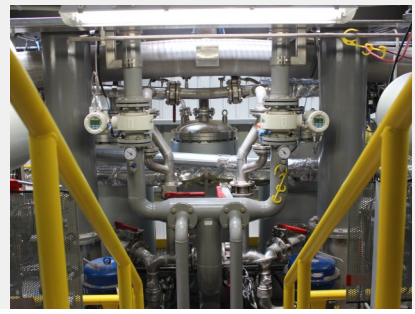
Because of the long distance our engineers paid special attention to low maintenance efforts and service demand. Therefore the robust VacuDry® plant is equipped with modern control technology: in urgent cases our econeers have online access to the PLC unit. The specially developed modular concept saved time during the construction and commissioning period as well as transport costs and staff needed on site. Since the VacuDry® unit is a closed system there are almost no emissions. Also, the energy consumption is very low compared to other treatment systems. Hence it got the approval to operate close to a residential area.

Performance data

Vacuum dryer type:	2 x VacuDry® 12,000
Batch size:	2x 10,000 litres
Heating system:	400 °C thermal oil unit - heated by natural gas
Operating pressure:	50 - 800 mbar (abs)
TPH content output:	C6- C36 < 0.5%

Plant during installation

Belt conveyer in the feeding unit



View into the condensation unit

Design characteristics

- Designed for hydrocarbon contaminated soil and sludge
- Separation of hydrocarbons for reutilisation
- Specially designed high temperature discharge system for accelerated batch times
- Redundant vacuum and cooling water system for highest plant availability
- Emission and dust free system through encapsulated treatment of exhaust vapours and solid material
- Plant fulfills ATEX requirements for Zone 2 operation