

Case Study

Centralised treatment of oil sludge and other industrial waste



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Imagine – Zero industrial waste ... !

Oil sludge and other industrial waste

by econ industries VacuDry® indirect heated thermal desorption

Centralised treatment of various sources of industrial waste has been established in many European countries over the last decade. Many facilities are still equipped with non state of the art technology and therefore cannot fulfil the broad field of applications with regard to industrial waste remediation. econ's international client decided to be one step ahead and erected a new econ industries VacuDry® unit at an old existing facility in the UK. Mainly for the thermal desorption of oil based waste – such as oil sludge and contaminated soil – this unit will fulfil multiple tasks in the field of industrial waste remediation.

The unit was built and installed in 2009 at an old building at a location in the north of England. Due to the tight space limitations and the already existing zone for explosion protection, the whole unit was redesigned to fit into the building and fulfil all ATEX requirements of the surrounding complex. Hand in hand with our client we built a real custom-made installation for the required purpose.

The plant mainly remediates oily waste from various sources. Other solvent containing industry wastes such as paint sludge, shredded oil tanks, spray cans and other light weight material can also be treated. With the acquisition of the econ industries VacuDry® technology the old treatment facility has broadened its field of application and is ready for the future of waste remediation.

Performance data

■ Vacuum dryer type:	VacuDry® 12,000
■ Batch size:	8,400 litres
■ Heating system:	1,200 kW / 400 °C thermal oil unit - fired by natural gas or fuel oil
■ Operating pressure:	50 - 800 mbar(abs)
■ Optional equipment:	Cooling and solidification unit with internal heat recovery



Installation of the dryer unit



Final position inside the building



Screw conveyor with dummy material

Design characteristics

- Custom made solution to fit the special requirements of the client
- Redundant designed vacuum system with integrated flushing unit
- Fulfils ATEX requirements for Zone 2 operation, certified by the German regulatory body TÜV
- Intelligent exhaust system by co-incineration of exhaust vapours within the thermal oil unit
- Automatic separation of water and oil condensate for further recycling of the valuable oil fractions
- Direct service access to the PLC in case of system adjustments and changing conditions of the input material