

# WINDCARE CASE: Diesel Plague

- Preventing Emergency Engine Failure

**A clogged filter in an emergency generator system can potentially cause an engine to fail. The emergency generator system keeps turbines warm and lit and prevents condensation or ingress of saline mist in offshore wind turbine generators.**

## Water in Diesel

A client was troubled by water contamination in the diesel of two 60m<sup>3</sup> tanks out of four tanks in a diesel emergency system on a substation placed on the German continental shelf.

5m<sup>3</sup> diesel from one tank was disposed off and the tank mechanically cleaned. 60m<sup>3</sup> diesel was treated with a chemical biocide injection in an online system including pipes and pumps in the treatment process.

The tanks were mechanically rinsed demanding personnel operating in confined spaces and in an ATEX environment including additional safety equipment.

## Sludge Clogged Filters

Diesel plague can occur when water and diesel are mixed. The anaerobic microorganism feeds off the carbon content in the diesel and multiply in water. The resulting sludge clog filters, risking system failures.

## Rapid Result

This is a known project type to OTW; a rapid reaction and a quick customization of the solution to the clients condition ensured the performance.

The client was saved for the costs of system filters. Using a biocide type combustible in a diesel motor, OTW also saved the client the 60 m<sup>3</sup> of diesel originally infected by leaving the venue the emergency generator on the substation was analysed free from bacteria and a reduced delta P value indicated a clean system preventing engine failure.



▲ OTW work on a substation



▲ Tank inspection



▲ Mechanical cleaning of tank