



Westfalia Separator WERETROFIT –

Fuel Oil Treatment Systems
for Gas Turbine Power Plants



Prevent Expensive Damages

Safety first

During transport to power plants, fuels are often contaminated with seawater and other impurities. Fuel contaminated in this way can damage gas turbines.

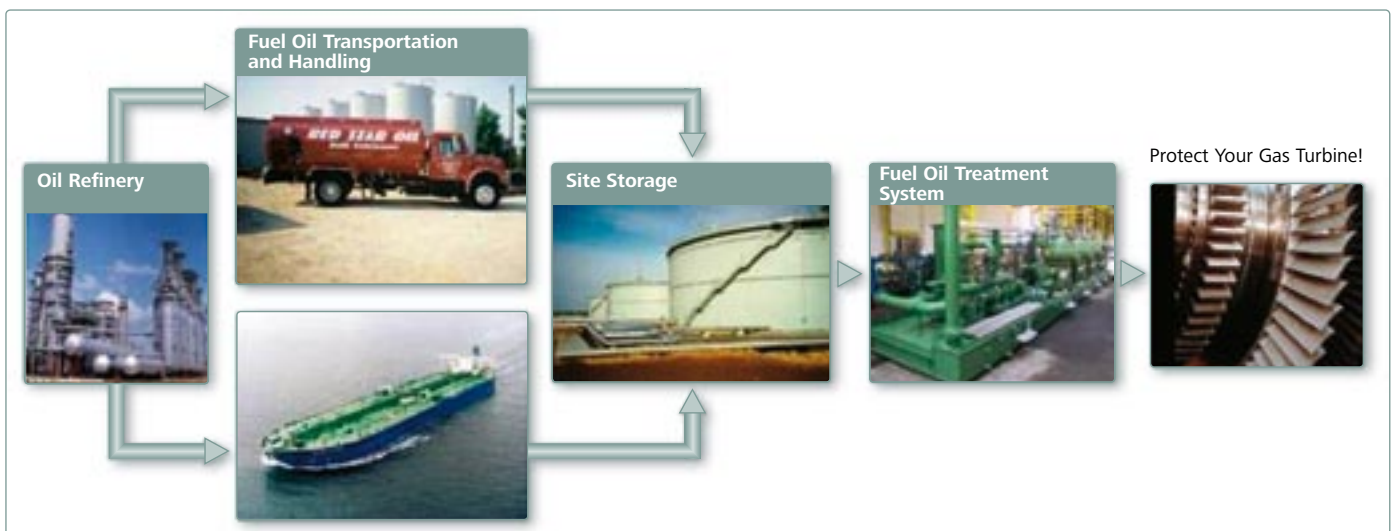
Contaminants in the oil increase the risk of hot gas path corrosion on the turbine blades. This significantly reduces the service life of the gas turbine and its fuel supply system.

Fuels (main or back-up) that are used without treatment will:

- Drastically increase the risk of hot gas path corrosion on the turbine blades. This reduces the capacity of the turbine and overhauling will be required much earlier than normal
- Significantly reduce the service life of downstream equipment such as filter inserts, gaskets, etc.
- Increase the risk of bacterial growth in the storage tank. High water content will also damage downstream equipment



Hot gas path corrosion at a first stage turbine blade



Contamination with seawater and impurities

The Clever Way to Separate!

High efficiency – low cost

Treatment with equipment from Westfalia Separator significantly reduces water and sediment in the fuel oil

Separation results:

Water content in treated oil is reduced way below 200 ppm.

The separated oil is practically free from metallic particles > 3 micron and heavy non-metallic particles > 5 micron.

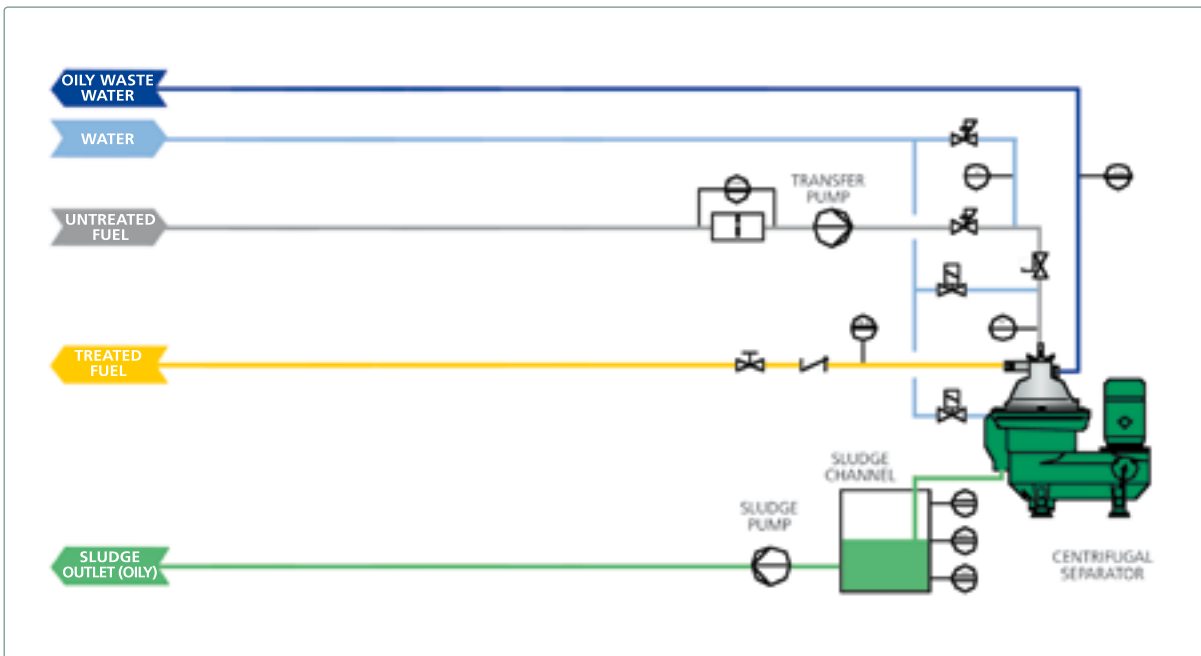
Customer benefit:

➡ Optimum salt reduction of Na and K down to ≤ 0.1 ppm
Reduction of the risk of bacteria growth in the tank

➡ Big cost savings for downstream equipment because of:

- Less filter cleaning (filter inserts)
- Less sealing wear
- Less maintenance for other equipment like pumps, nozzles, etc.

This know-how is not exclusive. It's unique!



Distillate fuel oil treatment plant

It's Payback Time!

Please check investment for an economical solution

Fill out the following questionnaire and send it
back to the following Fax: +49 2522 77-1778 or E-mail:
mineraloilsystems@gea-westfalia.de

Company: _____ Contact: _____

Phone: _____ Fax : _____ E-mail: _____

Fuel Oil Specification

Viscosity: _____ cSt@ _____ °C _____

Density: _____ g/ml@ _____ °C _____

Sodium (Na) + potassium (K) _____ ppm _____

Site Conditions

Temperature min.: _____ °C _____

Temperature max.: _____ °C _____

Humidity: _____ % _____

Installed GT-type: GT Fuel Specification

Max. allowance on sodium (Na) + potassium (K): _____ ppm _____

Required fuel oil treatment capacity: _____ m³/h or gpm _____

Voltage / frequency: _____ V _____ Hz _____

Special remarks: _____

If you are able to give us the following data, we will calculate for you the payback time for such a system:

Cost at site

Main overhaul of gas turbine: _____ US \$ or € _____

Price for MWh produced: _____ US \$ or € _____

Cost for filter inserts within one year: _____ US \$ or € _____

Cost for maintenance of fuel handling system: _____ US \$ or € _____



Distillate fuel oil treatment plant

Westfalia Separator WERETROFIT – That Counts

Optimise your investment

It's payback time!

Reduction of life cycle costs – Our world-wide experience shows:

- Increase of turbine blade lifetime by 50 – 70 %
- Necessary general overhauling of gas turbine at intervals of only 8–12 years (instead of 5 – 7 years)
- Reduction of gas turbine's "Power Lost" of approx. 2–3 % instead of approx. 5–7 %
- 50 % reduction in operating costs for downstream equipment

For short payback – fuel oil treatment from Westfalia Separator

- Beverage Technology
- Dairy Technology
- Oils and Fats Processing
- Chemicals, Pharmaceuticals and Biotechnology
- Oils and Fats Recovery
- Starch Technology and Industrial Biotechnology
- Environmental Technology
- Marine
- Energy
- Oilfield
- Industry
- Engineering
- Second Hand Machinery
- Service

The information contained in this brochure merely serves as a non-binding description of our products and is without guarantee.

Binding information, in particular relating to capacity data and suitability for specific applications, can only be provided within the framework of concrete inquiries.

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Mineraloil Systems

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