

# DESULPHURISATION TECHNOLOGY

## DESulphur

### THE NEW AND INNOVATIVE DESULPHURISATION TECHNOLOGY

- > Easy installation
- > In-line System
- > No need for external compounds
- > Low production costs



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Dedicated to innovation



# DESulphur

DESulphur is a new and innovative desulphurisation process to be applied to industry and marine installations that require the use of Fuel Oil , Heavy Fuel Oil (HFO), Marine Gas Oil or Marine Diesel Oil.

## How Can Desulphur Help You?

Restrictive regulations, the lack of fuel with low sulphur content in the market and the need of restricting the  $SO_x$  emissions, lead us to develop a solution urgently.

With DESulphur it is possible to reduce the sulphur content to levels allowed by the regulations, while keeping the thermal, physical and chemical properties of the fuel.

## How Does It Work?

DESulphur acts on the oxidation of sulphur species in fuel, having as result oxides and peroxides that are easier to remove.

The cavitation and thermal ionic dissociation of water presented in the fuel guarantees an efficient emulsification of the fuel.

It is an efficient process due to the presence of an oxidant produced *in situ* and also to the effect of ultrasound technology.

A phase separation allows the removal of the undesirable components obtaining a treated and cleaner fuel with low sulphur content.

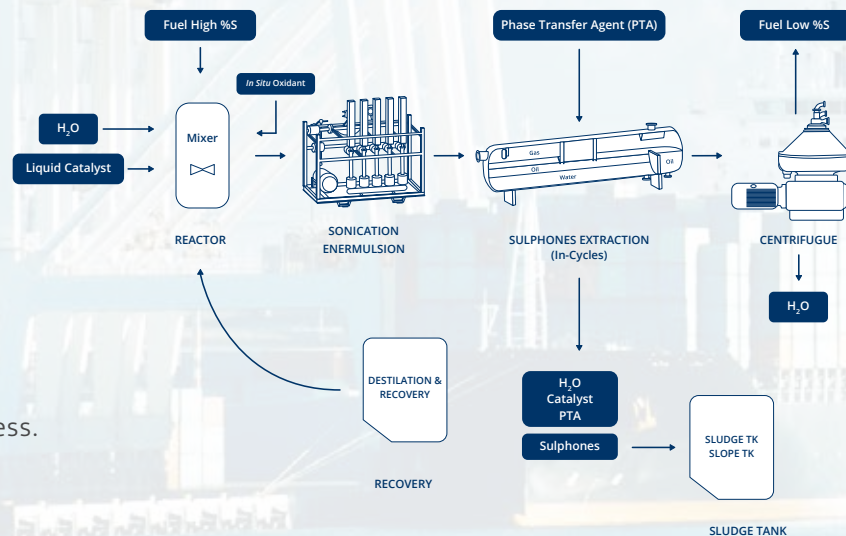


Fig 1. DESulphur process.



## Applications

Desulphur, as an alternative system to other conventional desulphurisation solutions can be used on a global scale, applied to several fields of industry and marine industry:



Recovery Fuels & Waste Treatment (slop oils)



Petroleum Industry



Refineries



Global Industries (that use HFO/ MGO on activities & systems)



Fuel Producers



Marine Industry (on board vessels - direct use)

## Advantages

### ECONOMIC

- > Oxidant agent produced in situ;
- > No need for external compounds;
- > Low production cost;
- > Reagents are economical, easy to obtain and can be recovered.

### SECURITY

- > Storage and handling of reagents don't present any harm;
- > Moderate operating conditions (pressure and temperature).

### ENVIRONMENTAL

- > Compatible with low flow rates. It can be applied onboard ships, allowing them to burn proper fuel;
- > Allows to reduce emissions.

BY USING ENERMULSION, THE SYSTEM WILL ALLOW YOU TO:

- > Reevaluate the fuel and/or slop oil: results on a higher economic profit when selling the product to potential clients due to its higher quality (e.g., for case of fuel producers);
- > Achieve savings up to 6%, when burning the treated fuel, also guaranteeing cleaner engines.

## ABOUT TECNOVERITAS

TecnoVeritas is a specialist provider of engineering services and solutions to the shore and marine industries, with more than 20 years of experience.

Headquartered in Portugal with a global reach, TecnoVeritas is focussed on emissions and energy management, and has a strong track record of delivering high quality solutions combining innovation with world leading technical expertise.

### Dedicated to innovation

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