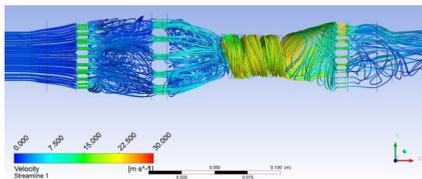


Cavitation Treatment

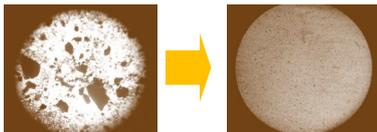


DEWA-OIL for process oil and oil-based emulsions



Overview

DEWA-OIL is a complex of equipment for improving oil and oil-based products. DEWA-OIL reduces cracking temperature, oil viscosity, pour point temperature, makes oil more homogeneous. Oil, processed in DEWA-OIL, has higher output of light fractions like benzene and diesel. Oil and oil-based fuels becoming uniform what improves combustion characteristics.



Applications

DEWA-OIL is effective for improving Heavy Fuels Oils (HFO), mazut, oil wastes, etc. Watered oil is becoming homogeneous (uniform). Major applications are:

In oil-refineries – for increasing light oil fractions output, reducing consumption of catalysts, dissolving liquid and gaseous additives, etc.

In combustion systems – for improving combustion characteristics, reducing slogging, etc.

Special applications – dissolving liquid additives and gases in oil, micro-milling of solid particles which may exist in oil, especially in heavy fuel oil, other applications.



Depending on oil characteristics DEWA-OIL may reduce *oil viscosity* up to 30%, reduces *pour point* from -6 deg C till -16 deg C, increases output of *light fractions* on 2...3% or more for different types of oil. Watered oil processed in DEWA-OIL becomes uniform and does not include "water lenses", produced water-oil emulsion is stable for a long period.

How It Works

Oil is pumped with a certain pressure into the *RIA* or *Static Reactor* which produces a myriads of bubbles (caverns). These caverns are collapsing immediately after they are produced. This process (*cavitation*) creates a local pressure inside a bubble up to hundreds bars and destructs long molecular chains. As the result all components (oil, water, additives, ..) are properly mixed in a form of stable emulsion. Depending on type of cavitator (*RIA* or *Static Reactor*) processing requires single pass or multiple passes through the complex.

Working pressure for *RIA* is approximately 5...9 bars, working pressure for static reactor is 12...20 bars depending on oil type.



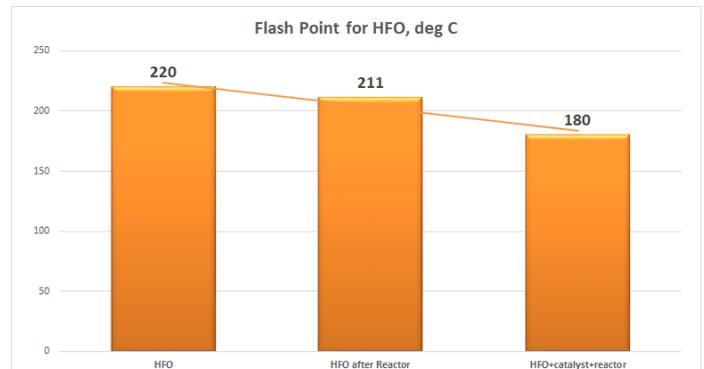
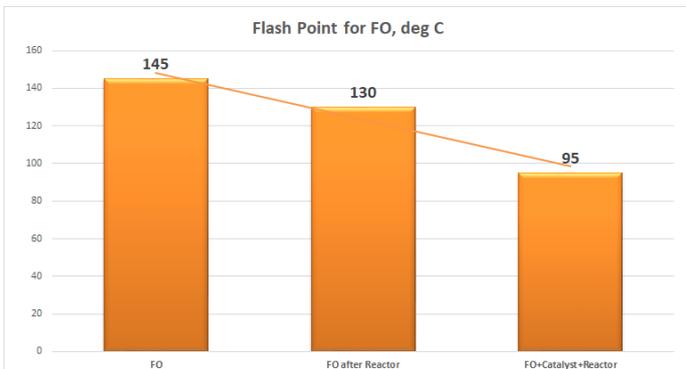
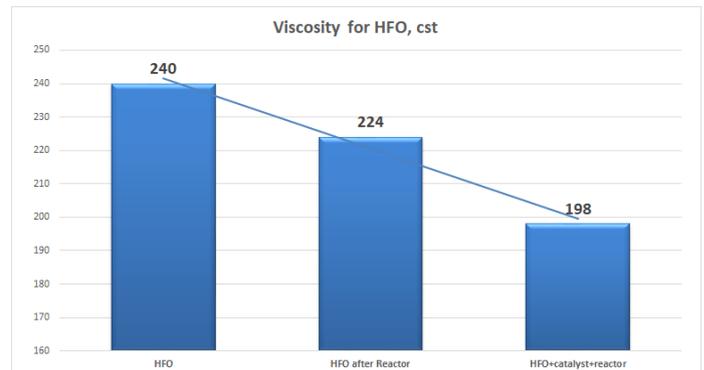
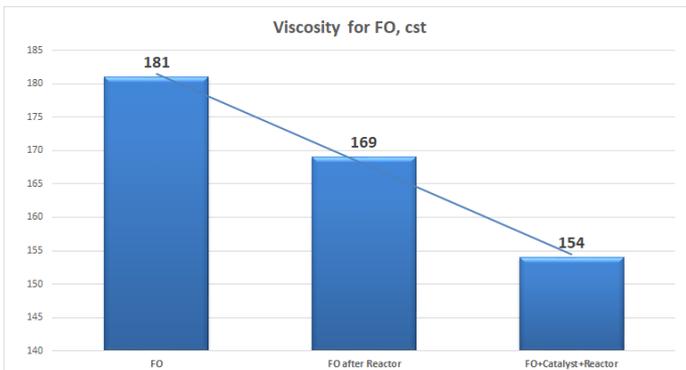
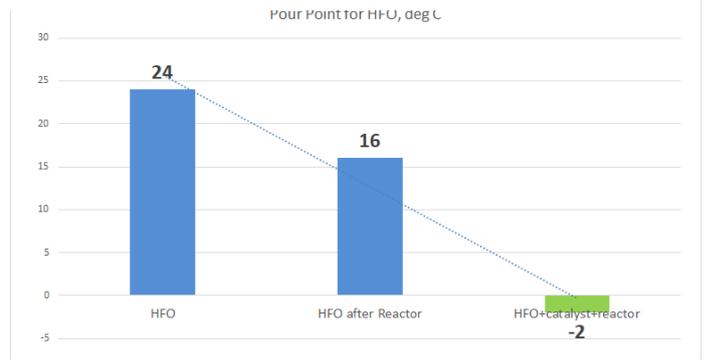
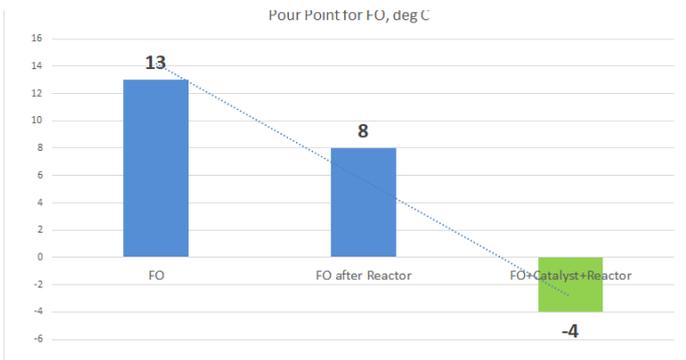
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Effects&Results

DEWA-OIL has a remarkable own impact on oil (FO, HFO) pour point, viscosity and flash point. Based on results of our customers result are even stronger when standard catalysts are used—DEWA-OIL increases an impact of catalysts reducing its' total consumption.



Model Range

DEWA-OIL is designed for media with certain properties and for certain applications. Possible configurations are:

- For inline installation
- For recirculation of oil-based products in tanks.

DEWA-OIL capacity may vary from 0.5 m3/hr to 100 m3/hr for single unit.



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