Benefit Case – Fuel Change Over Calculation (FCOC)

SITUATION AND CRITICAL ISSUE

Compliance with strengthened Sulphur Emissions in ECAs 2015

The new IMO Sulphur Cap of 0.1% for vessels entering ECAs comes into force on Jan 1\textsuperscript{st} 2015. This typically requires the change over from HFO to low sulphur MDO/MGO. Besides necessary retrofitting it is an essential challenge to determine a suitable starting time for the change over process.

DNV GL SOLUTION

- Fuel change over manual is required onboard
- Calculation of optimized change-over interval: Risk of fines when shortened, unnecessary fuel costs when prolonged
- Regards the specific fuel system design, e.g. layout, sulphur content of fuels, return pipe and buffer tank volume, mixing valves, machinery consumption
- Complex numerical simulation of fuel change over process by differential fuel mixing model, taking into account constraints on temperature change

VALUE DELIVERED

- Ship specific DNVGL Fuel Change Over Calculator
- Corresponding report contains tailored calculated tables and explanations for using them
- Optimized change over process saves unnecessary costs for low sulphur fuels
- FCOC supports in verifying compliant operation in case of PSC

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