

Alfa Laval Fuel Conditioning Module – Automatic Change-over Process

Desk Top Technical Review

Report for: Alfa Laval SpA

Reference:
MCS1612-0026

Reporting date:
10 October 2017

Report by:
Timothy Wilson





Statement of Fact

Office: **FOBAS -
Lloyd's Register Global Technology Centre
Southampton Boldrewood Innovation Campus
Burgess Road , Southampton, SO16 7QF**

Date: **10 October 2017**

This Statement is issued to Alfa Laval SpA Via De Marini 53 Torre Shipping

**Subject: Alfa Laval SpA Auto Change-Over Review
Documents References:**

- 9013905 02 System Description,
- Fuel Change Over PSI 160404 Dated 2016.04.04
- 9013906 02 Operating Instruction.

This statement is issued to confirm that the undersigned marine fuels consultant has carried out a technical review of the subject documents on the auto change-over feature. Reference should be made to the accompanying report Reference MCS 1612-0026 for considerations on manually settings so required.

The review concludes that in accordance to the subject documentation provided the auto change-over function should provide a controlled and safe switch over taking into consideration the requirements to control the key characteristics of viscosity and the temperature gradient throughout the change-over from a high sulphur fuel to a low sulphur fuel and equally from a low sulphur to a high sulphur fuel oil in a safe and consistent manner.

It should be noted that the operator has responsibilities to enter required fuel parameters and operational set points such as for viscosity and temperature to ensure correct operation. Further there is responsibility for the crew to assess the compatibility of the two fuels beforehand and take measures to monitor that the changeover is carried out safely in accordance to best industry practices.

Details and conditions of the technical document review are given in the accompanying report
Ref: TID 1607-0052

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Report summary

At the request of Alfa Laval SpA, the undersigned consultant to Lloyd's Register (LR) EMEA's Marine Consultancy division for and on behalf of LR FOBAS, has carried out a desk top technical review of the Automatic Change-Over procedure installed in the Fuel Conditioning Module (FCM) for its stated purpose, as defined under the documentation provided, listed below:

- I 9013905 02 System Description
- II Fuel Change-Over Ref No. PSI 160404 Dated 2016.04.04 9 Submitted by email on 21 Nov 2016
- III 901390602 Operating Instruction

An automatic change-over system should be designed around the control of the key parameters of a fuel, primarily viscosity and temperature, integrating both cooling as well as heating capabilities. Features for a manual override would be expected.

Based on the information provided and taking into consideration the observations recorded in this report; LR FOBAS considers that the automatic change-over system design has taken into account all the required critical considerations to ensure a safe change-over is carried out in a timely manner. It should be noted that the success of the auto function is dependent on the manual input of fuel characteristics, such as the density and viscosity of the fuel as loaded, usually taken from the Bunker delivery note or from an independent analysis report and also the necessary pre-checks on compatibility between the fuels have been verified.

Written by:

Timothy Wilson

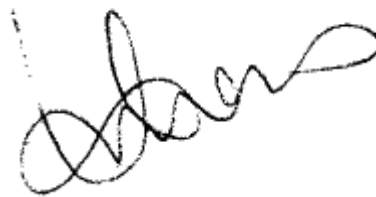
Signature:



Approved by

Usman Muhammad

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Designation:

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Designation:

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