

## LAMPIRAN 3

### *Email upgrade software*

#### **ecr1**

**From:** EmailPC/Tanggung Foja <postmaster@vessel.com>

**Sent:** 2016年6月17日金曜日 10:19

**To:** Chief Engineer Rm PC; ECR PC2; ECR PC3; Internal/ECR1 PC; Internal/GAS PC

**Subject:** FW: DFDE Software upgradation.

**Attachments:** DFDE software.docx

-----Original Message-----

From: saji.paul@klsm.jp.kline.com [mailto:saji.paul@klsm.jp.kline.com]

Sent: Thursday, June 16, 2016 13:58

To: h9nh@globeemail.com; 3etb6@globeemail.com; postmaster@vessel.com

Cc: shinohara.mikihide@klsm.jp.kline.com;

rupesh.sinsinwar@klsm.jp.kline.com; klsmtlng@klsm.jp.kline.com

Subject: DFDE Software upgradation.

Dear Captain & Chief Engineer,

Wrt the below message , we will be modifying the software of the DFDEs to accommodate the below mentioned countermeasure.

1. Gas trip ( S/O to MGO) based on the MFI limit.( load based.)- to minimize the risk of Gas
2. Resetting the wrongly set Lo alarm/ trip of Main Lo and T/C. limits-Refer attached
3. PFI setting to improve the starting characteristics.

Rest of the parameters will be untouched.

So first , each engine software needs to be downloaded by the vessel and sent to Wartsila, they will make the above mentioned changes and send it back. Once vessel received- it needs to be downloaded, engine fully tried out , by all combinations- and once fully satisfied, will pass on to the next engine.

Respective TSI will communicate and do the needful so that all our engines are updated.

Thanks for your Cooperation.

With Regards,

C. Saji Paul.

Ph:+81 3 3595 6446.

Mob: +81 80 5532 5074.

From: Shinohara, Mikihide (KLSM)

Sent: Monday, June 13, 2016 1:34 PM

To: MASTER TANGGUH FOJA; MASTER TANGGUH JAYA; MASTER TANGGUH PALUNG

Cc: KLSM TLNG; KLSM MLNG; Saji, Paul (KLSM); Rupesh, Sinsinwar (KLSM);

Rajakumar, Pramodh (KLSM); Yamasaki, Takato (KLSM); Iwaki, Hiroyuki (KLSM);

Kanda, Shunichi (KLSM)

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Subject: 2016 TLNG-0014 // Mixed Nitrogen gas to DFDE fuel gas line

TO: MASTERS OF VESSELS AS ADDRESSED.

FM: KLSM Tokyo.

CC: As attached.

DD: July 13th 2016.

SUBJECT : 2016 TLNG-0014 // Mixed Nitrogen gas to DFDE fuel gas line

Dear Captain & Chief Engineer,

Please be informed that in our sister vessel blackout occurred after start GCU during enter the port.

We investigate root cause and strongly suspect that N2 gas mixed to DFDE Fuel gas line from GCU HDR N2 purge valve (CN915).

Please refer to attachment and below ship report.

//////////Quote//////////

We have found that GCU gas header pressure exceeded up to 0.8 MPa which should be less than LD Comp discharge pressure (500 KPa).

According to IAS trend data on 02/12/2015 19:27 which was 12 hours before blackout, GCU Gas Header pressure suddenly started to increase from 489 KPa and stopped with 874 KPa.

Increasing the pressure took 90 min and then pressure fluctuated with higher level than usual.

GCU Gas Header pressure then fluctuated between 900 KPa and 830 Kpa and this phenomena continued until GCU was restarted at 07:34 Dec 3rd morning.

In this high pressure period, pressure synchronicity between N2 Buffer Tank and GCU Gas Header pressure has been confirmed.

On the trend data, increasing pressure from 500 KPa to 550 on the MGE gas header was observed when GCU gas valve CG939 was opened.

We have hypothetically came to conclusion that 800 KPa N2 pressure accumulated in the GCU Gas header pipe went back to 500 Kpa MGE BOG pipe line and degraded BOG quality.

**BLACKOUT SCENARIO:**

Main Shaft Power at that period was kept 22500 KW and GCU was started for preparation entering port with four MGE Gas mode operation.

When GCU Gas valve CG939 opened, accumulated N2 (800 Kpa) in the GCU gas header(200m/m Dia x 80 m Length) which had been blocked between CG939 (ESD) and GCU BOG Shut Off Valve BGXV211 was introduced into MGE BOG line and mixed BOG intruded MGE normal performance.

440V MSB voltage dropped slightly and control system for Main Propulsion Motor detected LV and both Main Propulsion Motors trip activated.

Four running MGE suddenly lost electric load and engine speed increased in a flash, governor was not functioned due to gas mode operation, causing four MGE over speed trip.

GCU Gas header high pressure (800-900 KPa) disappeared after closing CTM at Gwang Yang on 05/12/2015 o/a 12:00 when GCU was started.

We have checked GCU Gas header trend data for recent five months and extreme high pressure has not been observed except captioned incident and DD period.

//////////Unquote//////////

Also we found that all DFDE MFI duration increased to almost max value before black out .

MFI duration value is changed depend Engine load and gas properties.

For the reasons described above,

We strongly request vessel to follow below procedure while starting GCU .

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1. Try out and put in use GCU, well in advance ( say 1 hour atleast) before vessel reach critical navigation areas/ before pilot boarding etc.
2. Confirm to GCU HDR pressure before and initial start up of GCU.

(And please suspect to leak of N2 purge valve if you found abnormally pressure.)

And we will plan below modification as countermeasures,

1. We will set the DFDE MFI duration offset max limit (limit varies with load) by Wartsila, which will trip DFDE to MGO as soon the MFI duration limit exceeds a particular value for that load.

2. Set GCU header - High pressure alarm in IAS ( say around 600 Kpa) to caution if any abnormality in the gas line.

We are discussing with Wartsila for MFI modification of high limit, and will inform once we have determined the modification detail.

Thank you for your kind cooperation and understanding.

Best Regards,

M.Shinohara

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Technical Superintendent

Technical Superintendent Team

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Received: from INT at Globe Wireless;

Thu, 16 Jun 2016 23:5

Sumber : Dokumentasi Kapal MV. Tangguh Foja 2016

