

NS RIF:

SURVEY REPORT

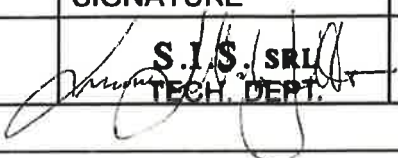
VESSEL:

Survey

: *Vibration Analysis Control according
Condition Assessment Program edited
by Bureau Veritas. Guidance Note
N.I. 465 DT R01 E (MAY 2015)*

Date of Survey

Place of Survey

	NAME	CERT No. / LEVEL	RULE:
Operator :			UNI EN ISO 18436-2
	NAME	SIGNATURE	DATE
Checked by :		 S.I.S. SRL TECH. DEPT.	

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INTRODUCTION

Instruction

This survey was carried out in accordance to the paragraph "7.3 Vibration Analysis", contained in the Condition Assessment Program for Ships edit by BUREAU VERITAS.

Date and Place of Survey

The survey was conducted on board the vessel on
by Mr. Aldo Cozzolino 2nd level analyst's with assistance being
given by Engineer officers on board.

THE SURVEY

Purpose

The purpose of the survey is to monitoring by vibration analysis method that all machinery apparatus checked is inside the admissible range foreseen by the relevant regulations.

Reporting

For the machines object of this analysis, the following criteria was applied:

- ISO 10816;
- ISO 8528-9.

VESSEL PARTICULARS AND DATA

IMO Number:

Ship Name:

Type & service:

Class:

Flag:

Port of Registry:

Gross tonnage:

Net tonnage:

SDWT:

LOA:

LPP:

Breadth:

Summer draft:

Main Engine:

Owner:

Place of Build:

Build date:

APPARATUS LIST: REGULATED BY ISO 8528-9 & 10816-5

No. 1 MAIN ENGINE

DIESEL MOTOR: MAN B&W
MODEL: 9L 27/38 - FVO
POWER: 3060 kW
RPM: 785

No. 1 SHAFT ALTERNATOR

ALTERNATOR: AVK
MODEL: DSU62L 1-4
POWER: 750 kW
RPM: 1800

No. 3 AUXILIARY GENERATORS: No.1, 2, & 3

DIESEL MOTOR: IVECO AIFO
MODEL: GE – 8291 SRM 75.12
POWER: 600 kW
RPM: 1800
ALTERNATOR: STAMFORD
MODEL: HC.M534 E2 470
POWER: 470 kW
RPM: 1800

EMERGENCY GENERATOR

DIESEL MOTOR: IVECO AIFO
MODEL: GE – 8210 SRI 25.00
POWER: 160 kW
RPM: 1800
ALTERNATOR: STAMFORD
MODEL: UC.M274 H2 160
POWER: 160 kW
RPM: 1800

APPARATUS LIST: REGULATED BY ISO 10816 - 3

No.2 STEERING GEAR PUMP: PORT & STBD

ELECTRIC MOTOR:

MODEL:

PUMP: GEAR PUMP

POWER: < 15 kW

RPM: < 1500

No.10 DEEPWELL CARGO PUMP: No. 1-5 Port & Stbd

ELECTRIC MOTOR: MARFLEX

MODEL: MDP 125

POWER: 87 kW

RPM: 3555

No.2 AUXILIARY DEEPWELL CARGO PUMP: No. 6 Port & Stbd

ELECTRIC MOTOR: MARFLEX

MODEL: MDP 100

POWER: 37 kW

RPM: 3555

No.2 HP AIR COMPRESSOR No.1&2

ELECTRIC MOTOR: JP SAUER&SOHN

MODEL: WP 45 L - 100

POWER: 11.5 kW

RPM: 1770

No.1 LP AIR COMPRESSOR

ELECTRIC MOTOR: JP SAUER&SOHN

MODEL: WP 45 L - 100

POWER: 11.5 kW

RPM: 1770

No.1 NITROGEN COMPRESSOR

ELECTRIC MOTOR: ABB

MODEL: M3BP 355 SMA

POWER: 288 kW

RPM: < 1800

COMPRESSOR: TMC

MODEL: ML250

No.2 ENGINE ROOM SUPPLY FAN No.1&2

ELECTRIC MOTOR: ABB

MODEL: M2 AA 3/4 160

POWER: kW 14.5

RPM: 1460

FAN

CENTRIFUGAL

VENT. AXIAL

No.1 CARGO TANKS GAS FREEING FAN

ELECTRIC MOTOR: EUROMOTORI

MODEL: 1 - 160 L 2/4

POWER kW 19.5

RPM: 1450

FAN

CENTRIFUGAL

VENT. AXIAL

BOW THRUSTER

EL. MOTOR: MARELLI MOTOR

MODEL: 315 MD

TYP: HA4V SO-355 DP

POWER: kW 400

RPM: 1750

FAC SIMILE

APPARATUS LIST: REGULATED BY ISO 10816 -7

No.2 FIRE PUMP No.1&2

ELECTRIC MOTOR: ABB
PUMP: GARBARINO
MODEL: MU 50/205 LE
POWER: 35 kW
RPM: 3555

EMERGENCY FIRE PUMP

ELECTRIC MOTOR: ABB
PUMP: GARBARINO
MODEL: MU 40/205 LE
POWER: 26.5 kW
RPM: 3555

No.2 BALLAST PUMP No.1&2

ELECTRIC MOTOR: ABB
PUMP: SVANEHOJ
MODEL: GTI 125 BXQ
POWER: kW 37,5
RPM: 1750

No.1 TANK CLEANING PUMP

ELECTRIC MOTOR: ABB
PUMP: SVANEHOJ
MODEL: NIP 65 BXQ
POWER: kW 43
RPM: 3555

No.2 MAIN S.W. CIRC. PUMP No.1&2

ELECTRIC MOTOR: ABB
PUMP: GARBARINO
MODEL: MU 80/250L
POWER: 13 kW
RPM: 1770

No.3 MAIN DDGG S.W. CIRC. PUMP No.1,2&3

ELECTRIC MOTOR: ABB
PUMP: GARBARINO
MODEL: MU 50/250LB
POWER: 4.6 kW
RPM: 1770

No.1 A/C PROV. S.W. CIRC. PUMP
ELECTRIC MOTOR: EUROMOTORI
PUMP: GARBARINO
MODEL: ML 80/315
POWER: 18 kW
RPM: 1750

No.3 DIATHERMIC OIL CIRC. PUMP No.1,2&3
ELECTRIC MOTOR: ALLWEILLER
MODEL: NTT 65 – 315/01
POWER: 12.5 kW
RPM: 1750

No.2 H.F.O. BOOSTER PUMP No.1&2
MODEL: IMO ACE 032 L3
PUMP: CENTRIFUGAL
POWER: 1.8 kW
RPM: 1710

No.2 M.G.O. BOOSTER PUMP No.1&2
MODEL: IMO ACE 032 N3
PUMP: CENTRIFUGAL
POWER: 1.8 kW
RPM: 1710

REPORT

Used instruments

Spectrum analyzer and vibrometer model FLUKE with the following technical features:

- Frequency range: 20 – 2000 Hz;
- Measuring system: (mm/sec – RMS);
- Number of averages: 5;
- Number of lines: 800;
- Serial number: 3094008.

Sensor Type: accelerator model FLUKE 3530769 with magnetic base:

- Sensitivity: 100 mV/g ($\pm 5\%$, 25 °C);
- Frequency range: Z Da 2 a 7.000 Hz ± 3 dB;
X, Y Da 2 a 5.000 Hz ± 3 dB;
- Serial number: 6252.

Vibrometer model Lutron with the following technical features:

- Frequency range: 10 – 1000 Hz;
- Measuring system: (mm/sec – RMS);
- Number of averages: 4;
- Number of lines: 400;
- Serial number: Q812199.

RATING CRITERIA

ISO 10816 Vibration Severity Standards

- **GOOD:** The vibration of newly commissioned machines normally falls within this zone.
- **SATISFACTORY:** Machines with vibration within this zone are normally considered acceptable for unrestricted long term operation.
- **UNSATISFACTORY**
(ALERT): Machines with vibration within this zone are normally considered unsatisfactory for long-term continuous operation. Generally, the machine may be operated for a limited period in this condition until a suitable opportunity arises for remedial action.
- **UNACCEPTABLE**
(DANGER): Vibration values within this zone are normally considered to be of sufficient severity to cause damage to the machine.

ISO 8528-9 Vibration Severity Standards

- **LEVEL I:** Acceptable for long-term continuous operation.
- **LEVEL II:** Unsatisfactory for long-term continuous operation.
- **OVER LEVEL:** Sufficient severity to cause damage on the machine

FAC SIMILE

RESULTS AS PER:

ISO 8528-9

&

ISO 10816-5

**RESULTS AS PER:
ISO 10816-3**

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**RESULTS AS PER:
ISO 10816-7**

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