



Vibration diagnostic report 8022-2026		
Project: Hafnia Ammolite IMO no: 9727534 Ordered by: Suntech Ship Management Pvt. Ltd	Date of measurement: 2026-01-23 - 2026-02-06	Place of measurement: During normal operation

Measurement condition

Measurements were taken during normal operating condition.

Results presentation

Measured values are presented in the table below. Each machine if applicable is separated for driver (el. motor, diesel engine, etc.) and driven unit (pump, compressor, etc.). *First column* of the table consist name of the equipment. *Second column* contains the highest value of vibration velocity measured on the equipment in all measurement points. *Third column* contains classification of the vibration class according to proper ISO standard and other normative documents. Classification depends on highest reading of measured equipment only. *Fourth column* contains additional readings of enveloped value of acceleration, which is helpful in detection of early stage of bearing wear. *Fifth column* contains remarks and suggestions based on the analysis of vibration signal. This column can be taken as the final conclusion about machine condition. If cell is empty, it means that there is no existing problem or defect shown in vibration signal.

Vibration standards

Following standards may applied for assessment:

ISO 10816-7	Mechanical vibration — Evaluation of machine vibration by measurements on non-rotating parts — Part 7: Rotodynamic pumps for industrial applications, including measurements on rotating shafts
ISO 14694	Industrial fans - Specifications for balance quality and vibration levels
ISO 20816-1	Mechanical vibration — Measurement and evaluation of machine vibration — Part 1: General guidelines
ISO 20816-3	Mechanical vibration — Measurement and evaluation of machine vibration — Part 3: Industrial machinery with a power rating above 15 kW and operating speeds between 120 r/min and 30 000 r/min
SAUER	Vibration of compressors CB 05-13

And makers recommendations

Legend according to vibration class

Cl. A	Newly commissioned
Cl. B	Unrestricted
Cl. C	Restricted long-term operation
Cl. D	High probability of damage, action required
Cl. D	Vibrations over the limits but actions are not required.
In limit	Unrestricted
Out of limit	High probability of damage, action required
Out of limit	Vibrations over the limits but actions are not required.



Results

In table are presented only readings with max. RMS results for each device equipment:

Machine name	Velocity RMS (mm/s) Max	ISO standard	Bearing Envelope 0-Peak (m/s ²) Max	Remarks and suggestions
DECK				
Composite boiler FD fan				
Composite boiler FD fan el. motor	1.488	Cl. A	11.505	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
<p style="text-align: center;">— Composite boiler FD fan el. motor</p>				
Steering gear supply fan				
Steering gear supply fan el. motor	1.371	Cl. A	20.573	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
<p style="text-align: center;">— Steering gear supply fan el. motor</p>				

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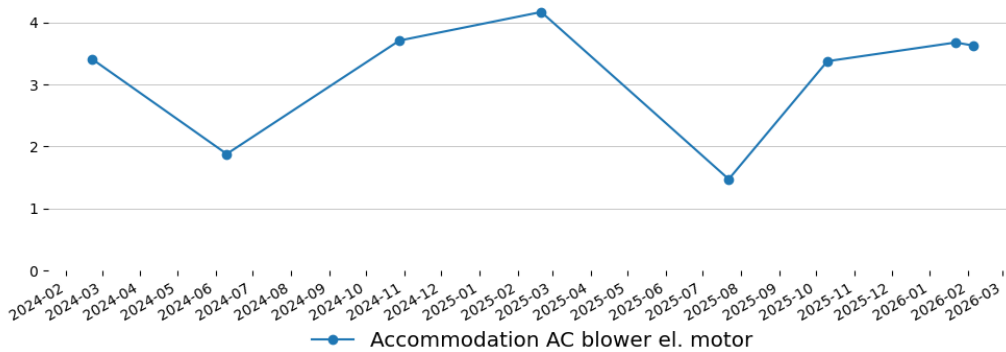


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Accommodation AC blower

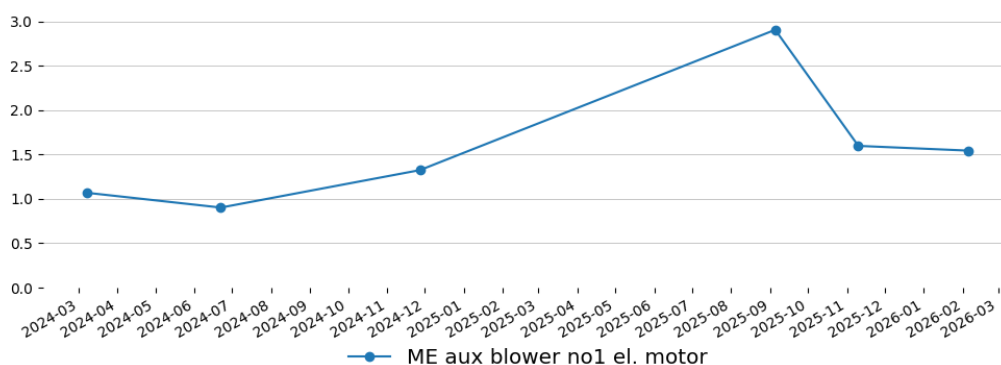
Accommodation AC blower el. motor	3.631	Cl. C	12.966	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
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ENGINE ROOM

ME aux blowers

ME aux blower no1 el. motor	1.544	Cl. A	15.252	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
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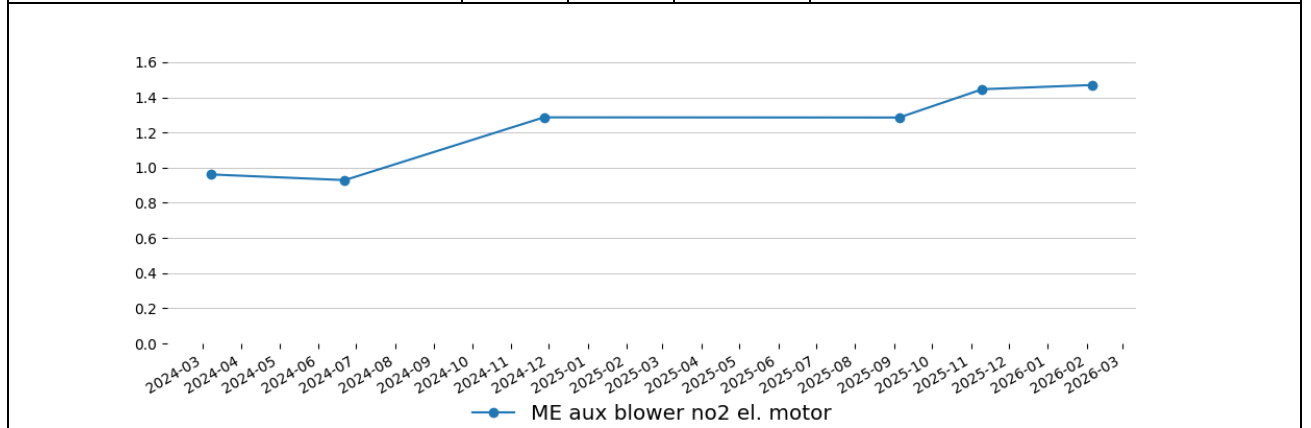
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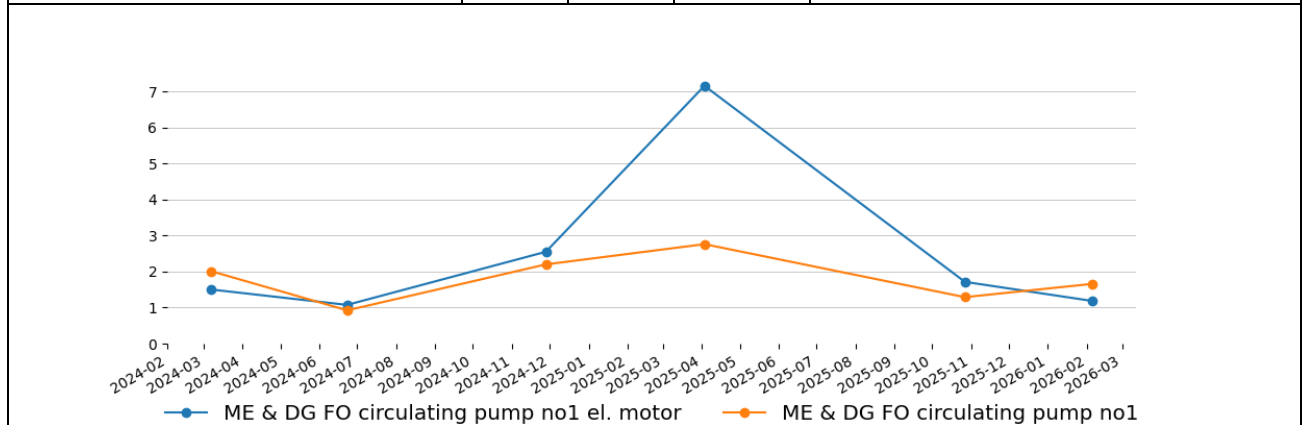


ME aux blower no2 el. motor	1.470	Cl. A	12.704	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
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ME & DG FO circulation pumps

ME & DG FO circulating pump no1 el. motor	1.186	Cl. B	9.631	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
ME & DG FO circulating pump no1	1.658	Cl. B	7.795	



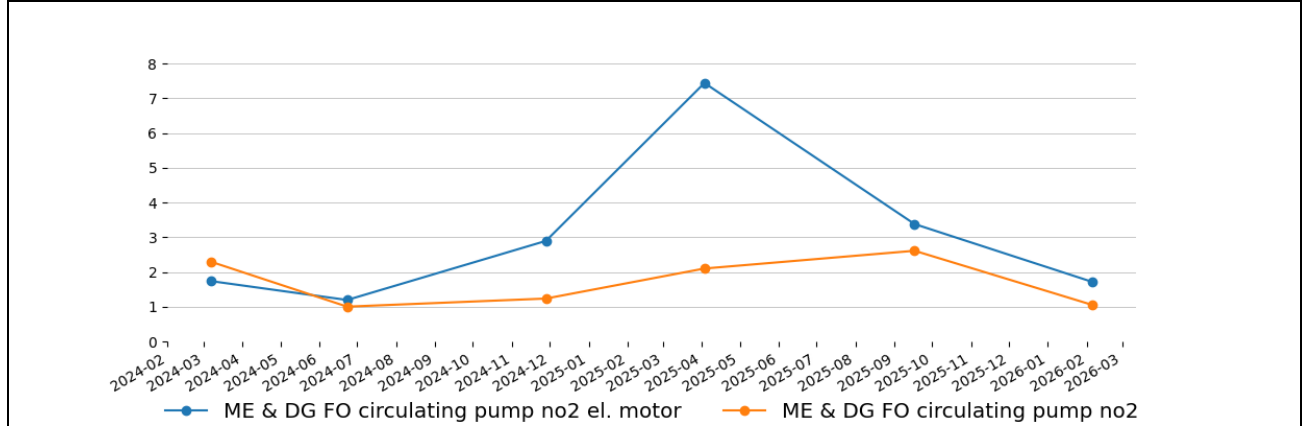
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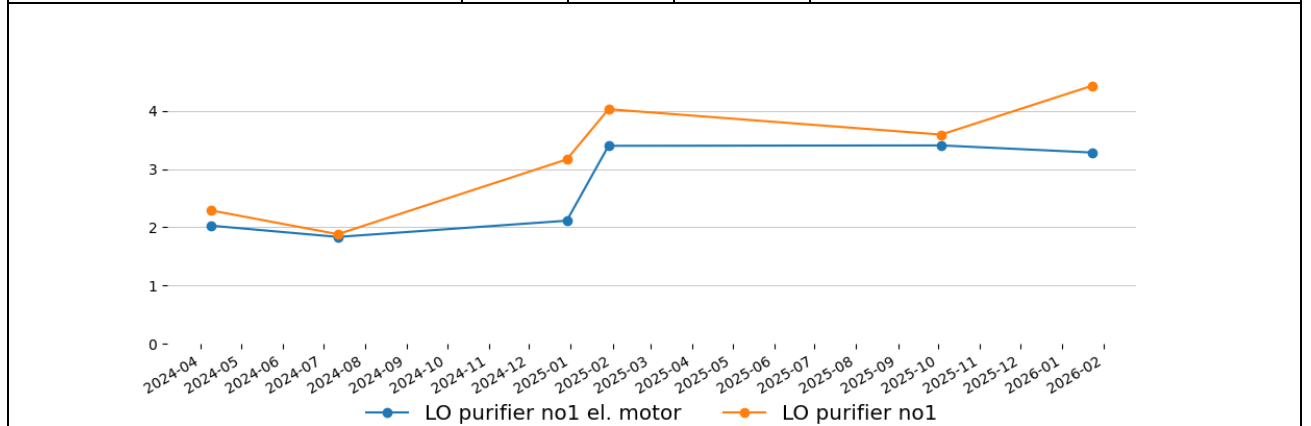


ME & DG FO circulating pump no2 el. motor	1.717	Cl. B	10.905	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
ME & DG FO circulating pump no2	1.054	Cl. A	12.966	



Purifiers

LO purifier no1 el. motor	3.287	Cl. C	14.952
LO purifier no1	4.434	Cl. B	-



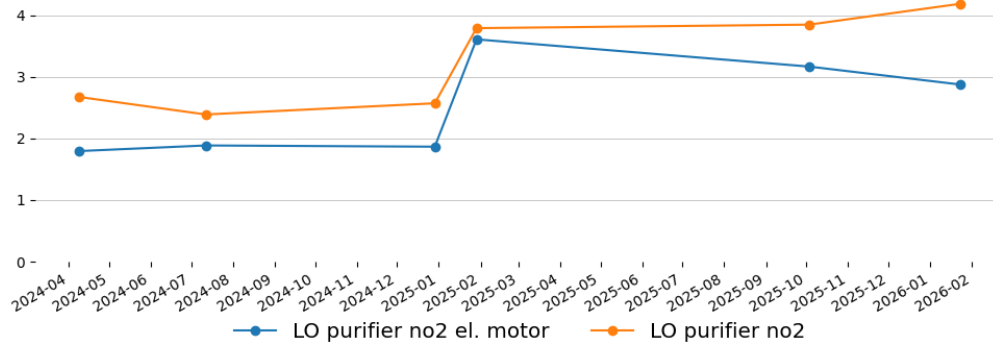
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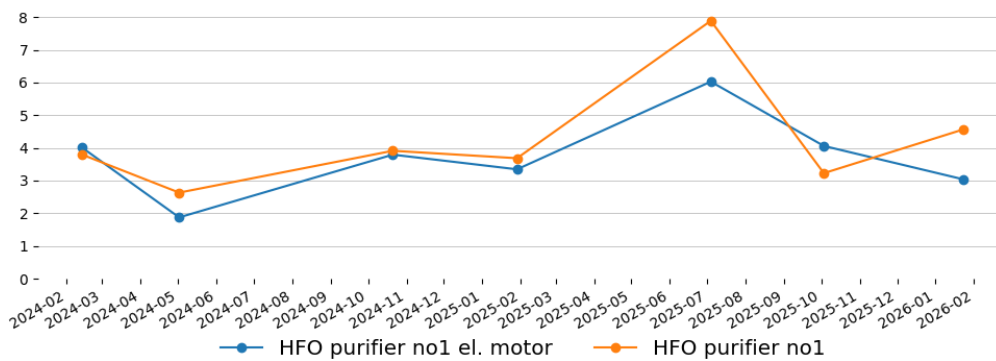
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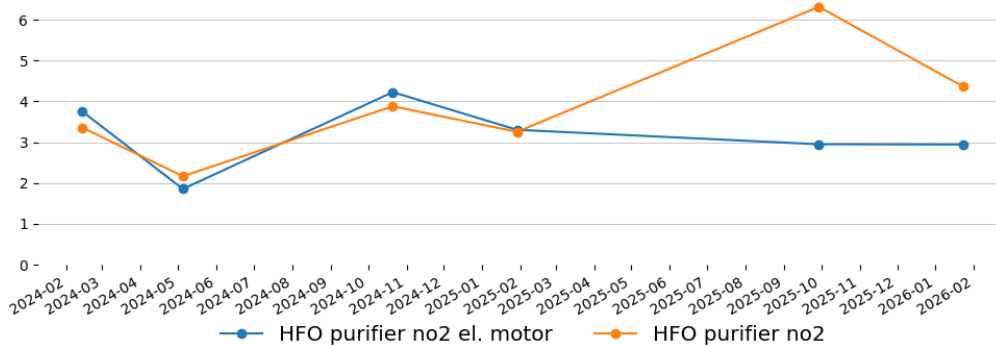
LO purifier no2 el. motor	2.876	Cl. C	21.473
LO purifier no2	4.186	Cl. B	-



HFO purifier no1 el. motor	3.040	Cl. C	20.835
HFO purifier no1	4.561	Cl. B	-



HFO purifier no2 el. motor	2.943	Cl. C	22.484
HFO purifier no2	4.366	Cl. B	-



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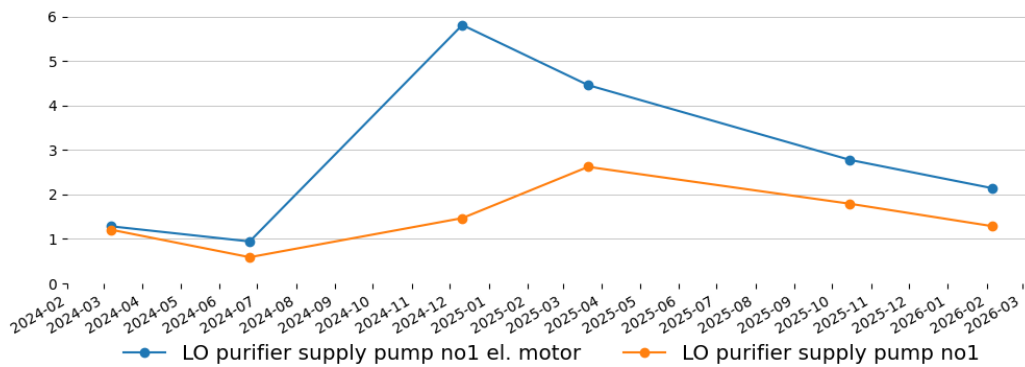


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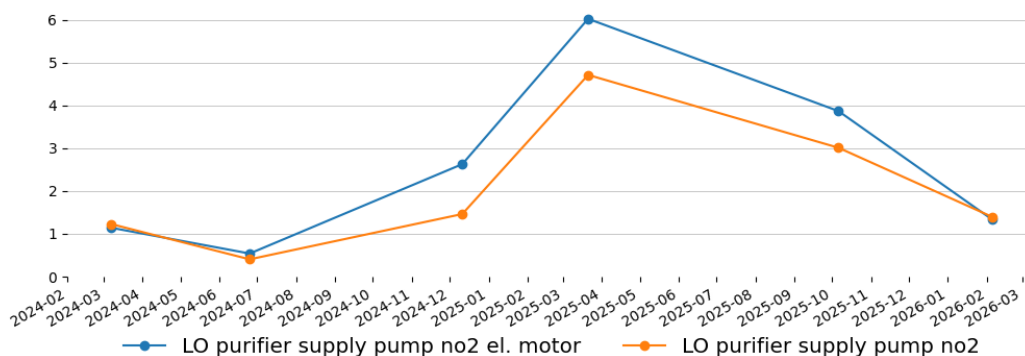


LO purifier supply pumps

LO purifier supply pump no1 el. motor	2.142	Cl. B	12.741	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
LO purifier supply pump no1	1.288	Cl. B	12.254	



LO purifier supply pump no2 el. motor	1.337	Cl. B	13.453	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
LO purifier supply pump no2	1.398	Cl. B	9.294	



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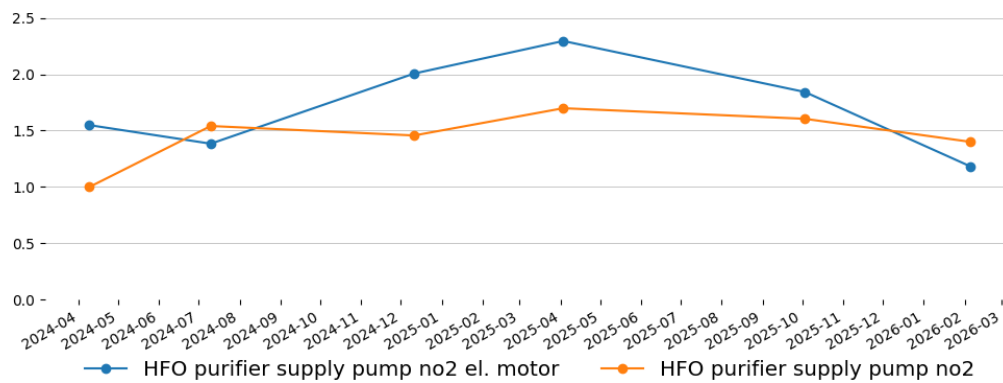


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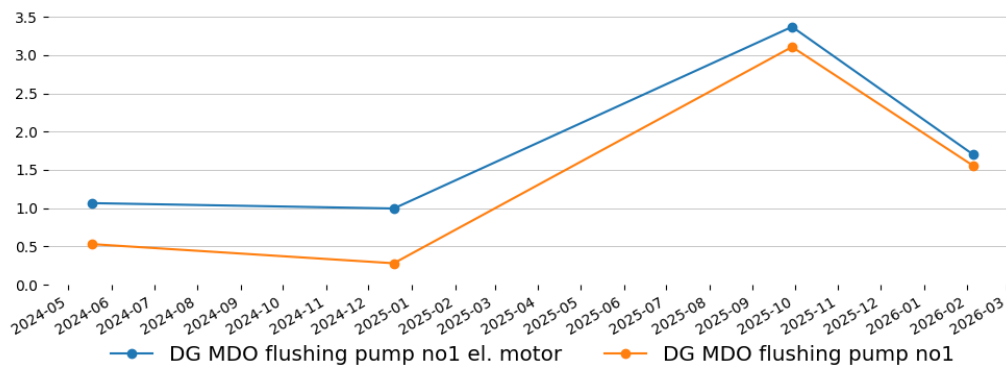
HFO purifier supply pumps

HFO purifier supply pump no2 el. motor	1.183	Cl. B	11.617	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
HFO purifier supply pump no2	1.400	Cl. B	9.668	



DG MDO flushing pumps

DG MDO flushing pump no1 el. motor	1.702	Cl. B	13.416	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
DG MDO flushing pump no1	1.556	Cl. B	7.158	



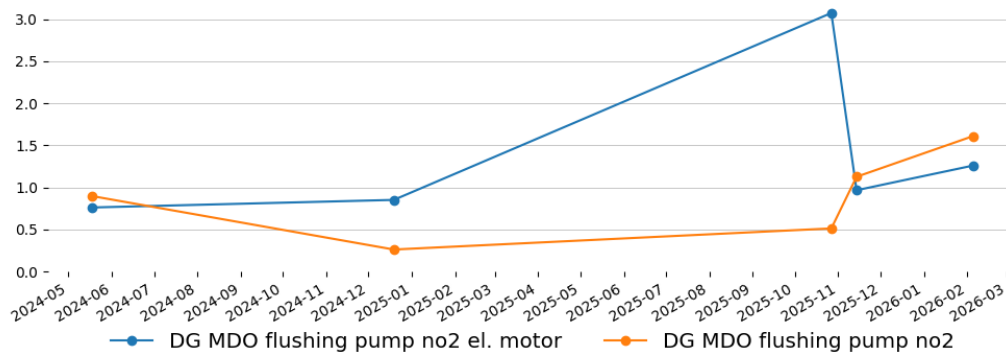
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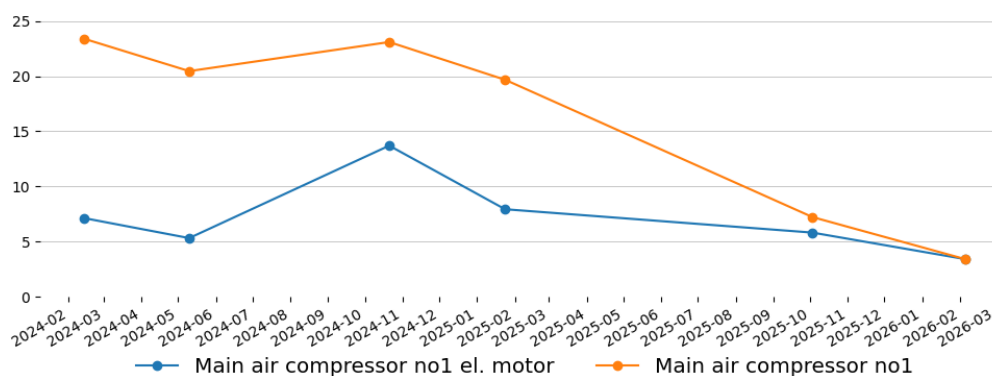


DG MDO flushing pump no2 el. motor	1.258	Cl. B	11.130	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
DG MDO flushing pump no2	1.608	Cl. B	7.195	



Main air compressors

Main air compressor no1 el. motor	3.404	In limit	11.654	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Main air compressor no1	3.407	In limit	12.854	



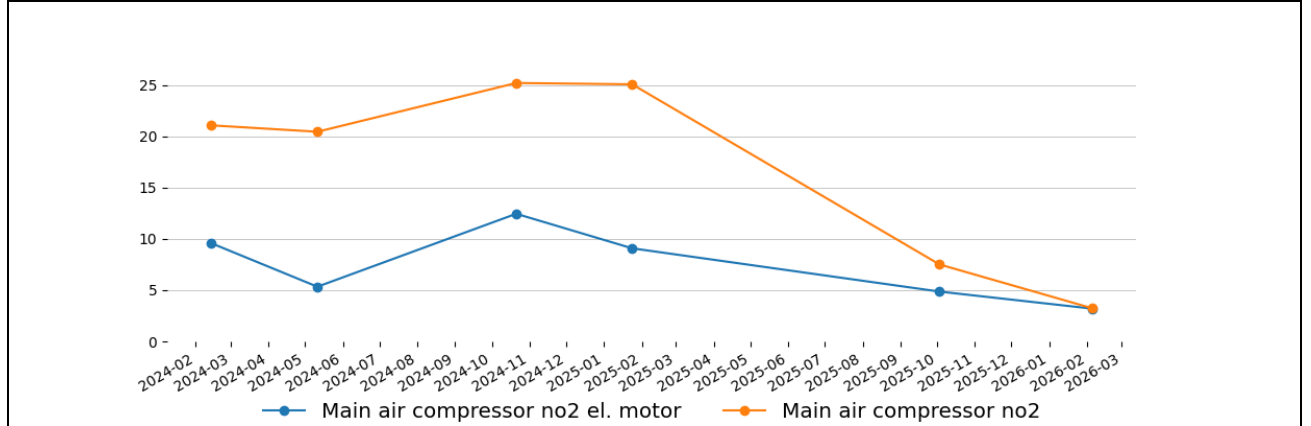
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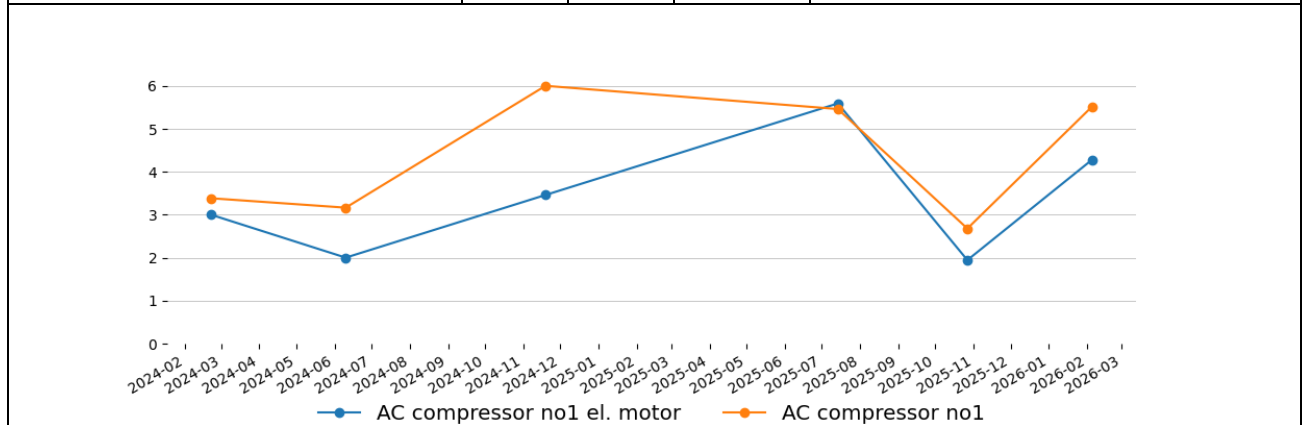


Main air compressor no2 el. motor	3.199	In limit	12.854	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Main air compressor no2	3.242	In limit	12.067	



AC compressors

AC compressor no1 el. motor	4.281	Cl. C	27.131	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
AC compressor no1	5.518	Cl. B	15.214	



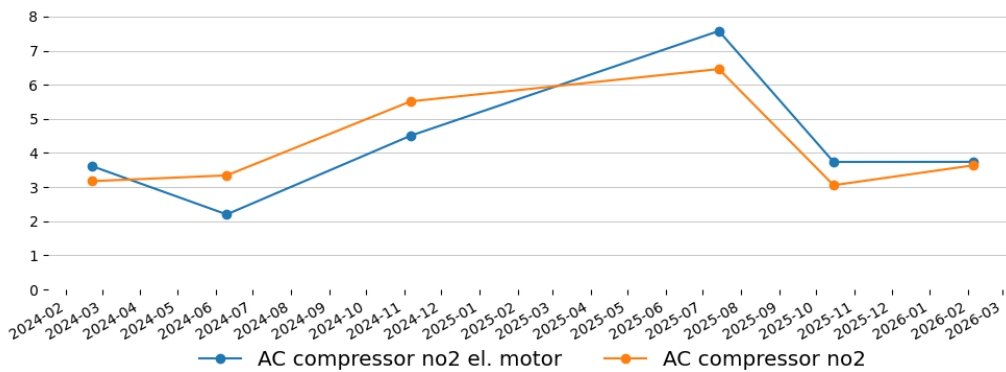
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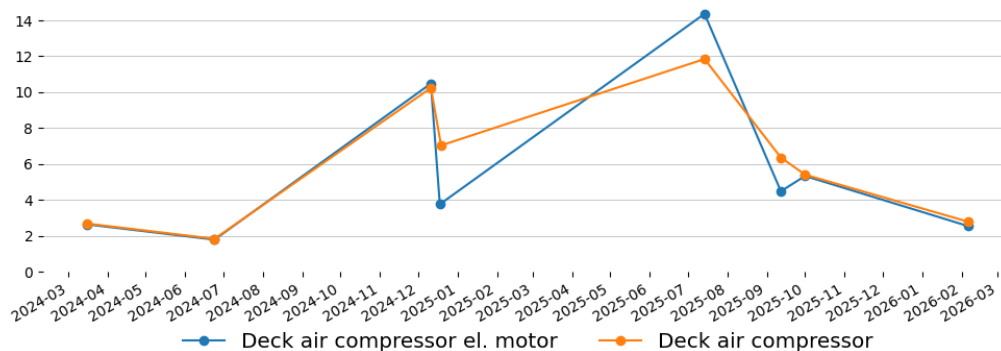


AC compressor no2 el. motor	3.740	Cl. C	13.528	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
AC compressor no2	3.636	Cl. B	107.737	



Deck air compressors

Deck air compressor el. motor	2.540	Cl. B	12.516	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Deck air compressor	2.782	Cl. B	13.566	



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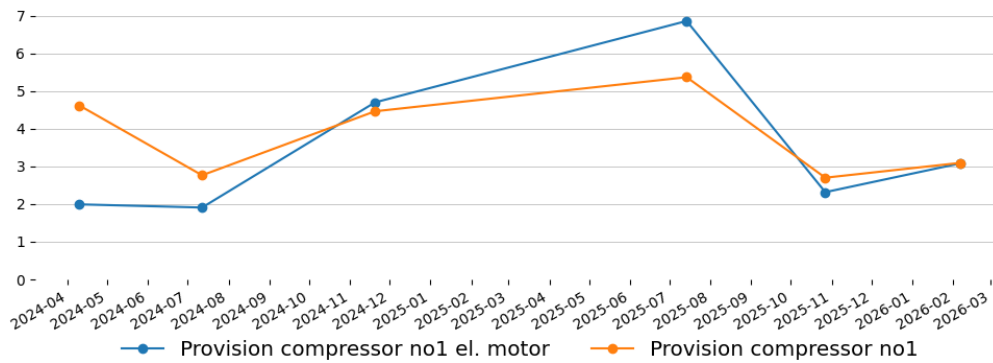


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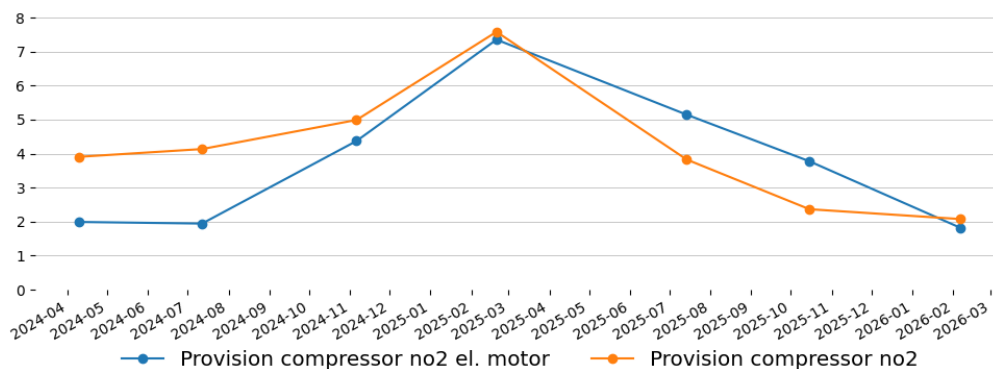


Provision compressors

Provision compressor no1 el. motor	3.082	Cl. C	15.102	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Provision compressor no1	3.095	Cl. B	16.189	



Provision compressor no2 el. motor	1.824	Cl. B	4.684	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Provision compressor no2	2.076	Cl. A	8.956	



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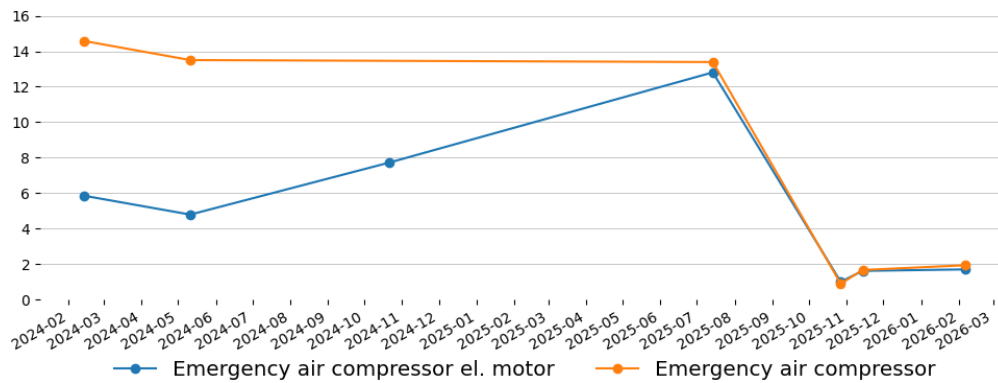


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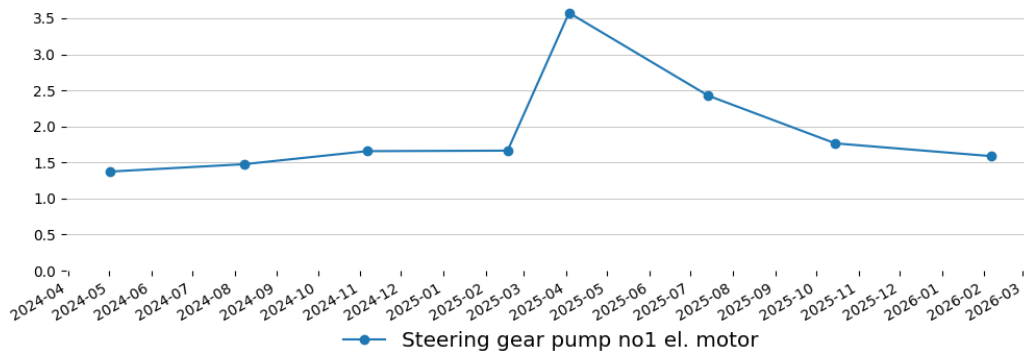
Emergency air compressor

Emergency air compressor el. motor	1.693	In limit	2.436	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Emergency air compressor	1.925	In limit	7.457	



Steering gear pumps

Steering gear pump no1 el. motor	1.588	Cl. B	3.785	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
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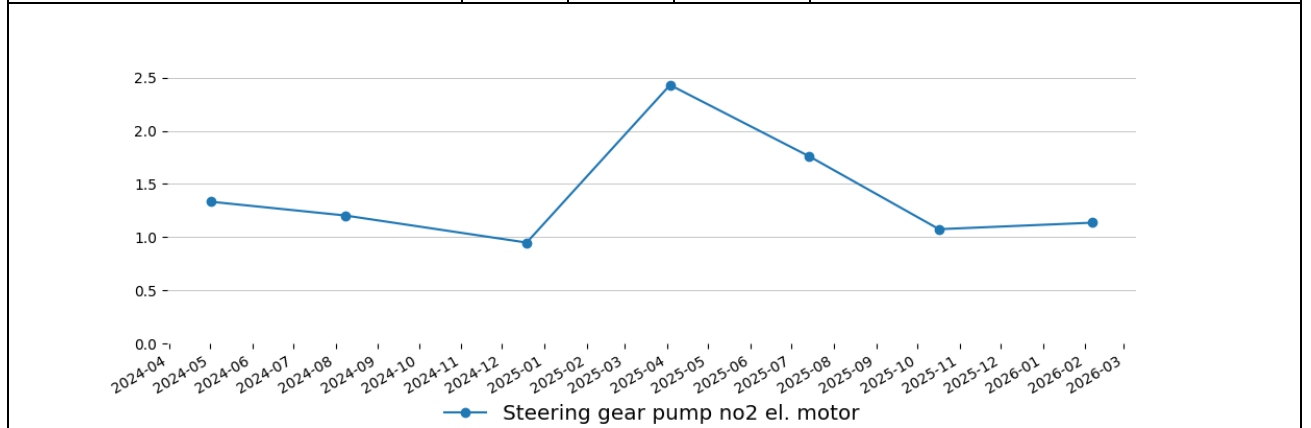
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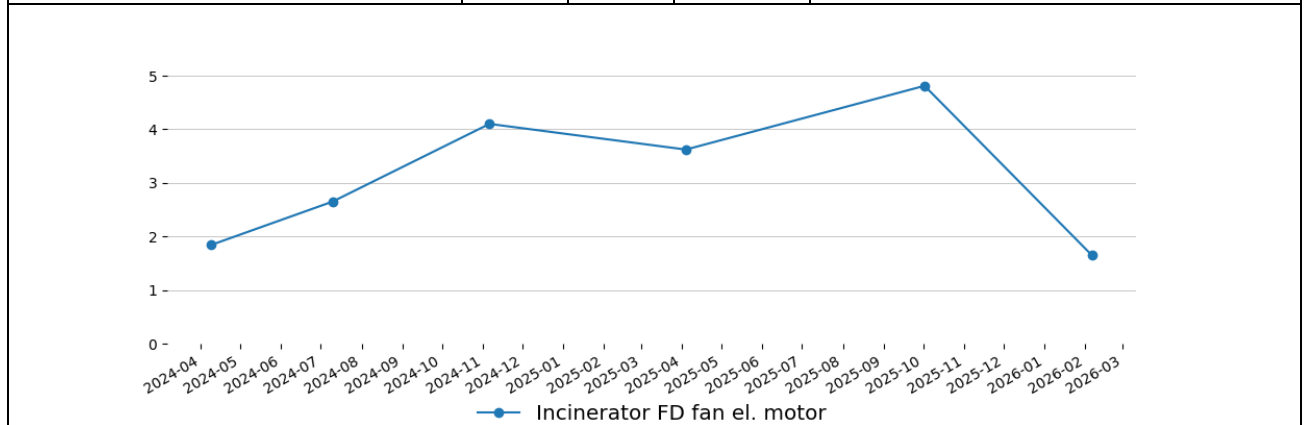


Steering gear pump no2 el. motor	1.136	Cl. B	3.672	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
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Incinerator FD fan

Incinerator FD fan el. motor	1.648	Cl. A	13.303	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
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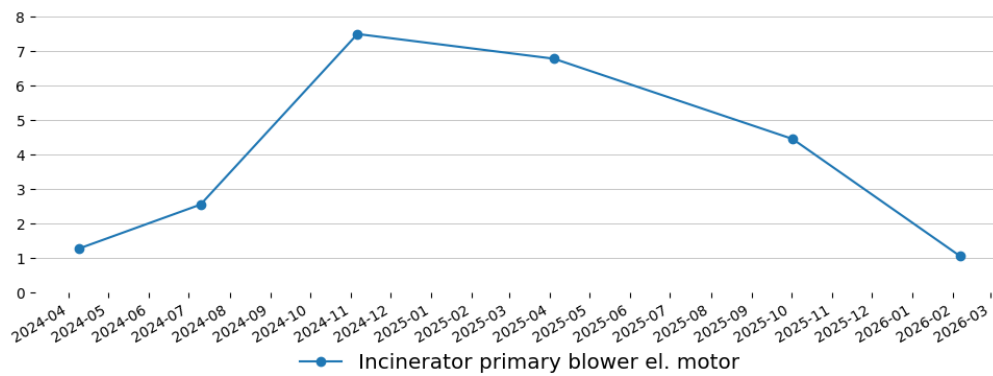


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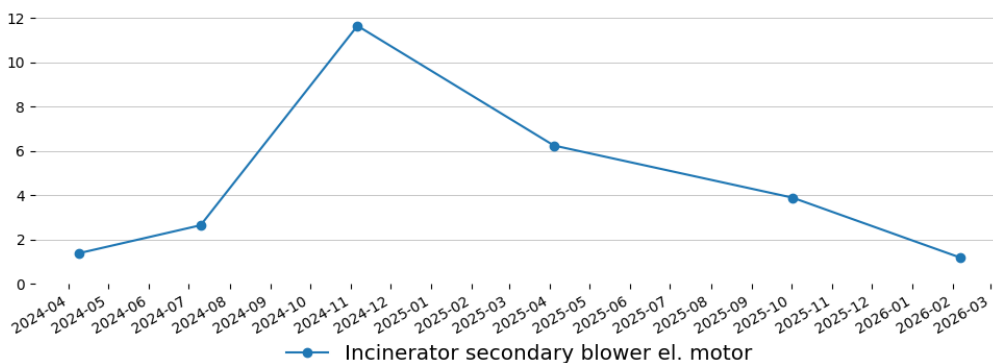


Incinerator blowers

Incinerator primary blower el. motor	1.056	Cl. A	5.434	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
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Incinerator secondary blower el. motor	1.179	Cl. A	2.960	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
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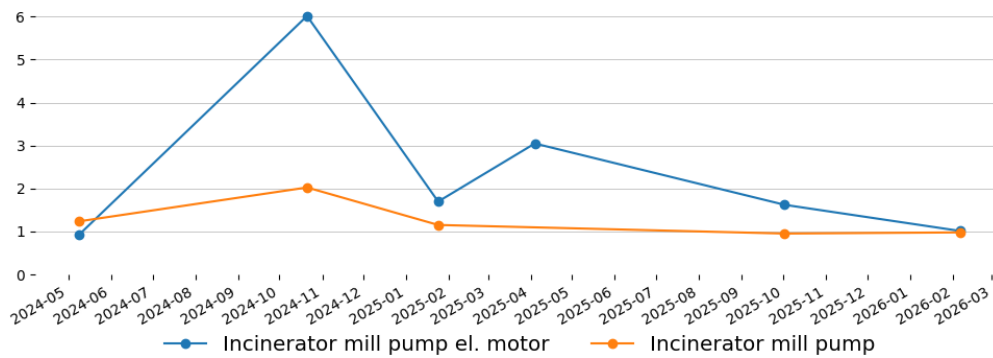


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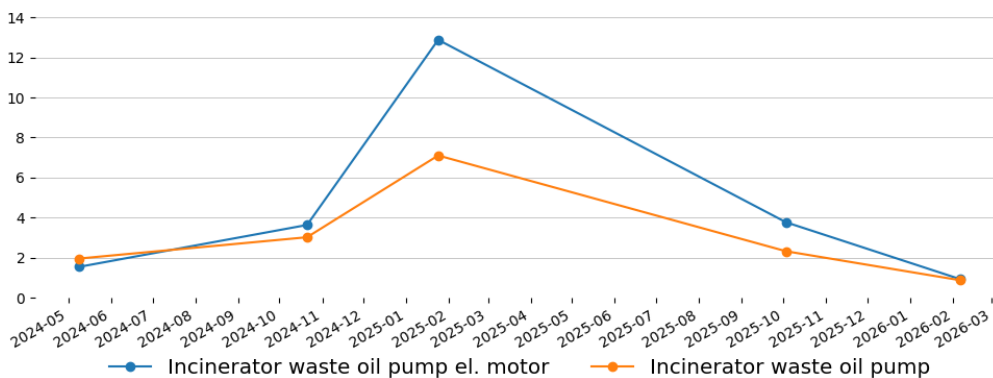
Incinerator mill pump

Incinerator mill pump el. motor	1.012	Cl. A	2.885	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Incinerator mill pump	0.978	Cl. A	1.424	



Incinerator waste oil pump

Incinerator waste oil pump el. motor	0.925	Cl. A	7.083	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Incinerator waste oil pump	0.870	Cl. A	3.485	



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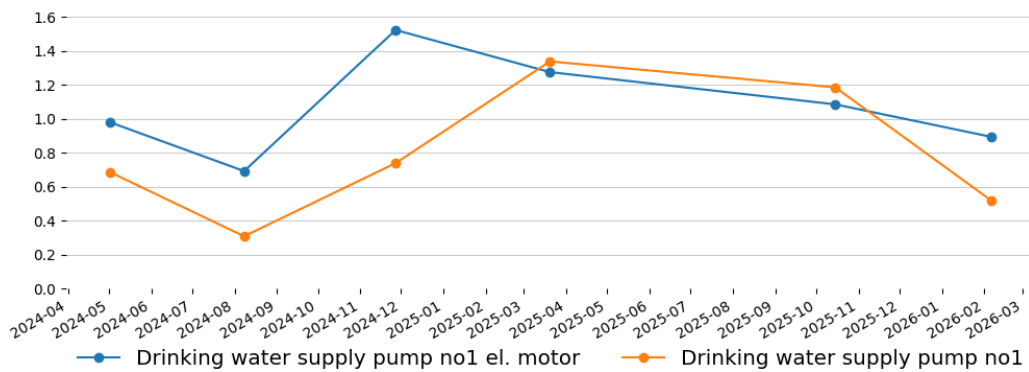


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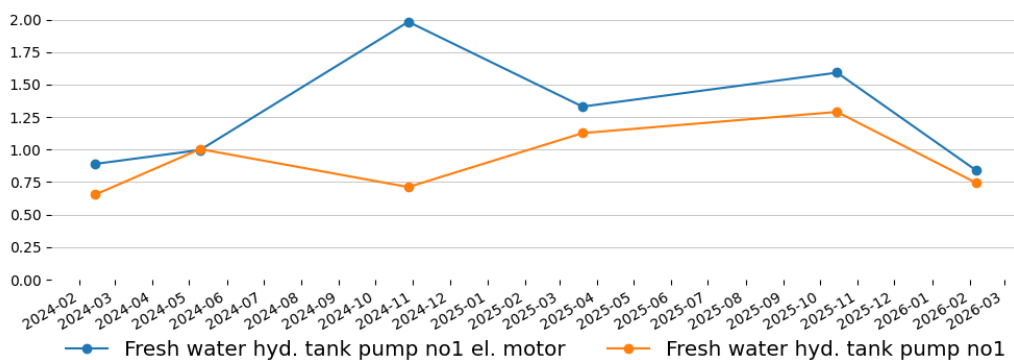
Drinking water supply pumps

Drinking water supply pump no1 el. motor	0.893	Cl. A	9.931	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Drinking water supply pump no1	0.519	Cl. A	4.085	



Fresh water hyd tank pumps

Fresh water hyd. tank pump no1 el. motor	0.841	Cl. A	7.457	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Fresh water hyd. tank pump no1	0.745	Cl. A	6.595	



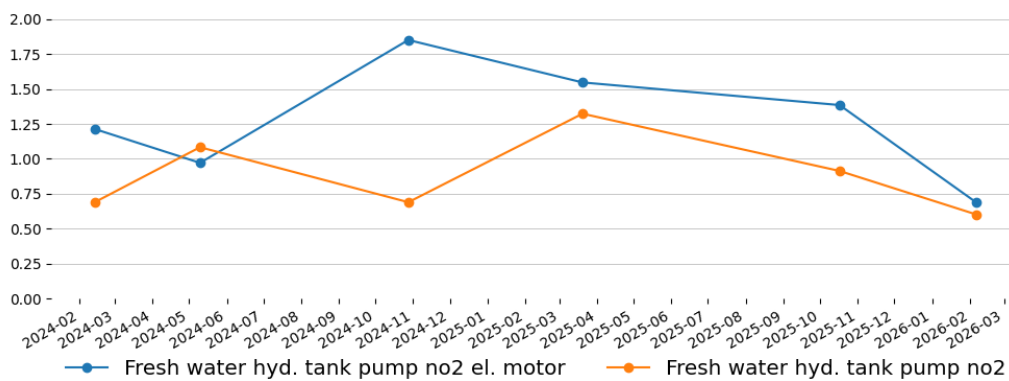
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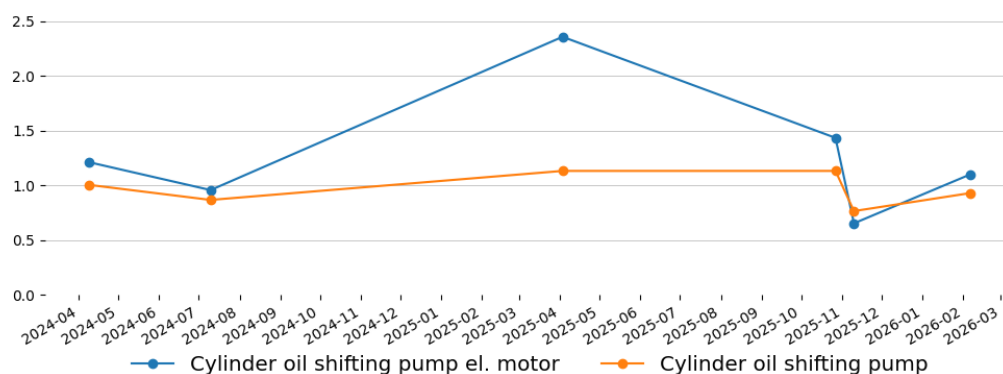


Fresh water hyd. tank pump no2 el. motor	0.689	Cl. A	5.546	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Fresh water hyd. tank pump no2	0.602	Cl. A	4.984	



Cylinder oil shifting pump

Cylinder oil shifting pump el. motor	1.097	Cl. A	5.883	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Cylinder oil shifting pump	0.927	Cl. A	8.881	



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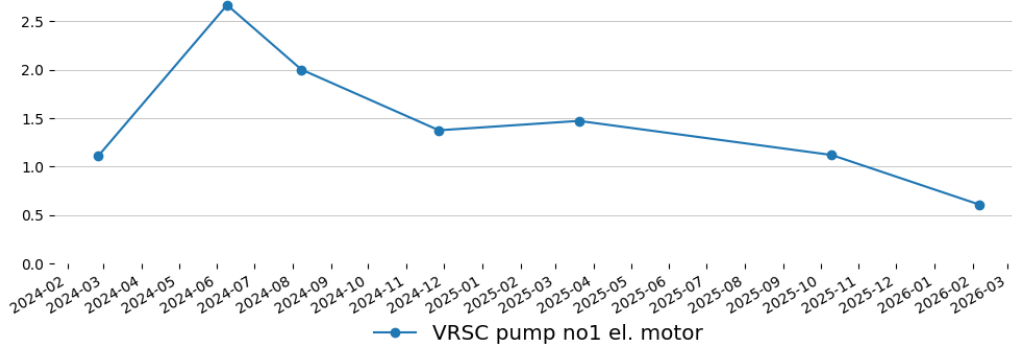


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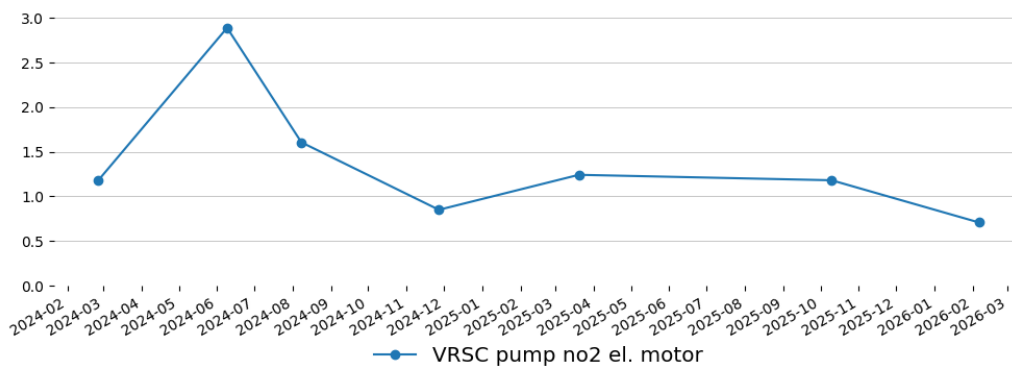


VRSC pumps

VRSC pump no1 el. motor	0.609	Cl. A	4.909	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
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VRSC pump no2 el. motor	0.708	Cl. A	5.434	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
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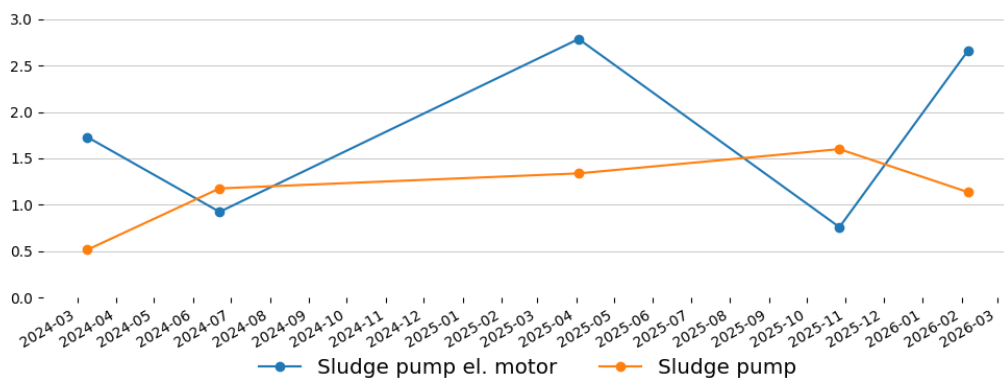


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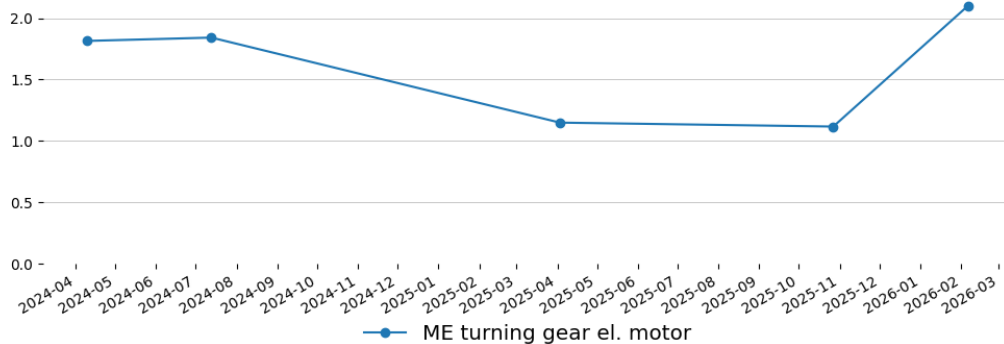
Sludge pump

Sludge pump el. motor	2.661	Cl. B	10.455	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
Sludge pump	1.136	Cl. B	10.343	



Turning gear

ME turning gear el. motor	2.101	Cl. B	11.467	A significant number of measurements show a very similar vibration spectrum, which is not typical. There is suspicion that the same machine was measured multiple times. Because of this it is hard to us to judge the correctness of all measurements, so we kindly ask you to retake the measurements with paying close attention to selecting correct machinery from list on MarVib. Before taking vibration reading please also kindly format MarVib device to avoid any data error.
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Measurement equipment:

Technical data	
Maker:	Info Marine
Type:	MarVib DC750
Serial number:	7507374
Measuring range:	2Hz-30kHz / RPM = 60-20000
Indication error:	± 0,5%

Equipment is calibrated, certificate for verification - if required.

Ship type: Chemical/Oil Tanker	Main dimensions: Length(b.p).....184,00 m Breadth(B.).....27,00 m
Sea depth: Least twice times greater than Vessel draught	
Measurement method: According to standard ISO 10816 : - procedure No. 2 Measurement report	

Summary

Next measurements should be done in three month period to obtain trend value for each equipment, in some cases even one month period is preferable.

This report is prepared in good faith based on measurement diagnostic done on available running rotary machine and documentation submitted.

Prepared by:
Service Engineer
Senapathi Venkata Saikumar

Approved by:
Tomasz Chuchra
mob: 0048 600052257