



YOUR PERFORMANCE IS OUR BUSINESS



NEREUS SUBSEA

VESSEL: M.V MORANDI

DATE: 2ND JAN 2024

LOCATION: SINGAPORE

Certified By:



An ISO 9001: 2015 Approved Company

UNDERWATER SERVICE REPORT

Report Number	NSPL – 01- 24- 1835	U/W	STILL PHOTO INSPECTION. BOROSCOPE X3 SCRUBBER. CCTV WITNESS BY PAINT INSPECTOR
Attendance Date	2 ND JAN 2024	Services	
Location	AEBC	Performed	



Doc No	Form 28
Ver.Rev	1.2
Issue Date	10/05/2021
Prepared By	GM
Approved By	MD

TABLE OF CONTENTS

UNDERWATER SERVICE REPORT	2
TABLE OF CONTENTS	3
UNDERWATER SERVICE REPORT	4
FORWARD AREA (STARBOARD) – VERTICAL SIDE	7
FORWARD AREA (PORT) – VERTICAL SIDE.....	8
FORWARD AREA (BOTTOM).....	9
MIDSHIP AREA (STARBOARD) – VERTICAL SIDE	10
MIDSHIP AREA (PORT) – VERTICAL SIDE.....	11
MIDSHIP AREA (BOTTOM)	12
BILGE KEEL (STARBOARD)	13
BILGE KEEL (PORT)	14
STERN AREA (STARBOARD) – VERTICAL SIDE	15
STERN AREA (PORT) – VERTICAL SIDE.....	16
STERN AREA (BOTTOM)	17
STERN FRAME/STERN TUBE	18
RUDDER	19
RUDDER	20
PROPELLER BLADES	21
PROPELLER BLADES	22
SEACHEST (STARBOARD) - GRATINGS	23
SEACHEST (PORT) – GRATINGS	24
EMERGENCY FIRE PUMP – GRATINGS.....	25
BOROSCOPE.....	26
DIVER’S REPORT	27

UNDERWATER SERVICE REPORT

Vessel:		Place:		Date
M.V MORANDI		Singapore		2 ND JANUARY 2024
Report no:	Class society:	Surveyor In Charge:		Water Visibility:
NSPL-01-24-1835	N/A	N/A		Satisfactory
Vessel's LOA:	DWT :	Draft Mark	Current	Vessel's Location
300 M	205123 T	18 M FWD 19 M AFT	Moderate	Anchorage Eastern Bunkering Charlie, Singapore
Service Description				
1. Still Photo Inspection. 2. Boroscope X3 Scrubber. 3. CCTV Inspected By Paint Inspector				
Equipment Used				
1. Full Spread Underwater Surface Supplied and CCTV Equipment. 2. Underwater Hydraulic Powered Brush kart. 3. Underwater hydraulic-powered polisher.				
Operation Time Sheet				
Day	Progress			Time
2 nd January 2024	Dive boat at the site.			1135HRS
	Dive boat alongside the vessel.			1410HRS
	Dive clearance was granted by the vessel.			1425HRS
	Commence diving operations.			1445HRS
	Complete diving operations.			2320HRS
	Report cleared.			2335HRS
	Cast off the vessel.			2350HRS
Dive Team				
Divers:				
Kyen Indra Adib Alim				
Dive Supervisor:				
Zuhairi				
Dive Boat Captain				
Razak				

General Remarks

1. Paint is in good condition overall with no major damage observed.
2. Weld seems to be in good condition with no visible damage.
3. Hull painting below the waterline in good condition and with no visible damage

Hull:

1. Bulbous bow on port and observed to clean.
2. Vertical sides on both Port and Starboard were clean.
3. The Flat Bottom was observed to clean.

Bilge Keels:

1. 07 series type on each side.
2. No damage or cracks observed on weld joints.
3. Bilge Keels on both port and starboard were observed to be clean.

Sea Chest Grids:

1. Gratings are bolted type.
2. Gratings on both port and starboard were observed to be lightly covered with about 05% barnacle, 10% algae, and 10% slime.
3. Gratings sighted intact and in good condition with seizing wires intact.
4. (02 no Port side) (02 no Starboard side) (01 no Fire Pump port aft)

Rope Guard:

1. Rope guard, welded type, observed to be in good condition with top and bottom access holes.
2. Rope guard was observed to be clean.
3. Cutters found to be intact and in good condition.

Weld Seams:

1. No visible damage or cracks were found.

Rudder:

1. Rudder Horn observed in good condition with no damage or crack sighted.
2. Rudder Stock observed in good condition with no damage or crack sighted.
3. Rudder plate observed in good condition with no damage sighted.
4. 01 Rudder plugs are sighted and intact.
5. Rudder was observed to be clean with about 10% barnacle.

Propeller:

1. Of 04 blades single type.
2. Blades observed in good condition.

3. Boss cone observed in good with cement covers intact and bolting assembly covered.
4. No oil leak from the shaft was observed.
5. No damage was sighted to the tail shaft assembly.
6. Propeller found to be heavily covered with about 80% barnacle, 40% Algae, 40% Slime, and 70% Calcareous

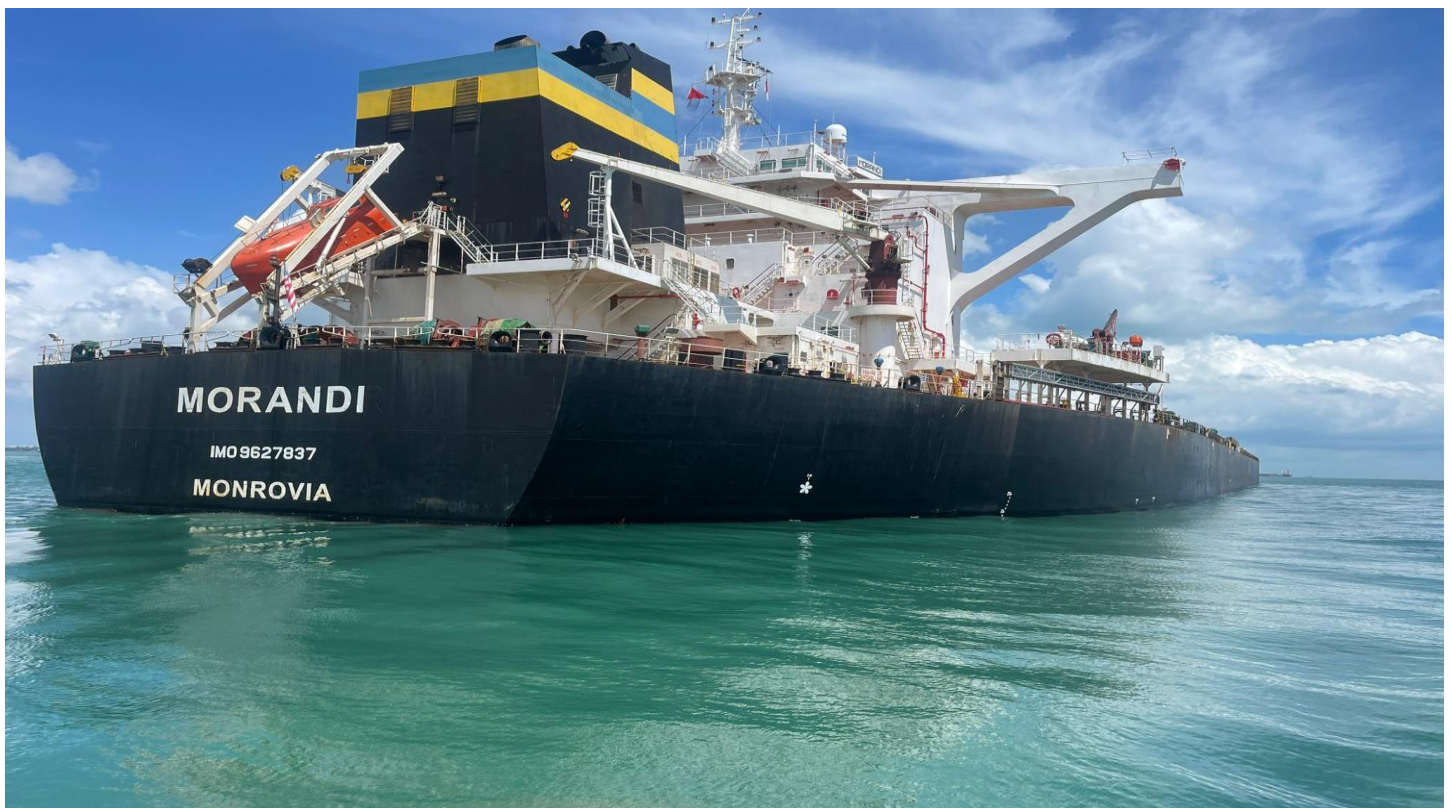
Underwater Sensors:

1. Speed log/Echo sounder sensors were observed to be in good condition and no visible damage.

ICCP/Sacrificial Anodes:

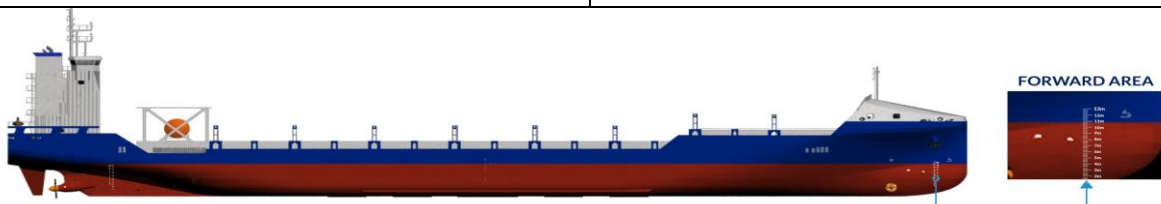
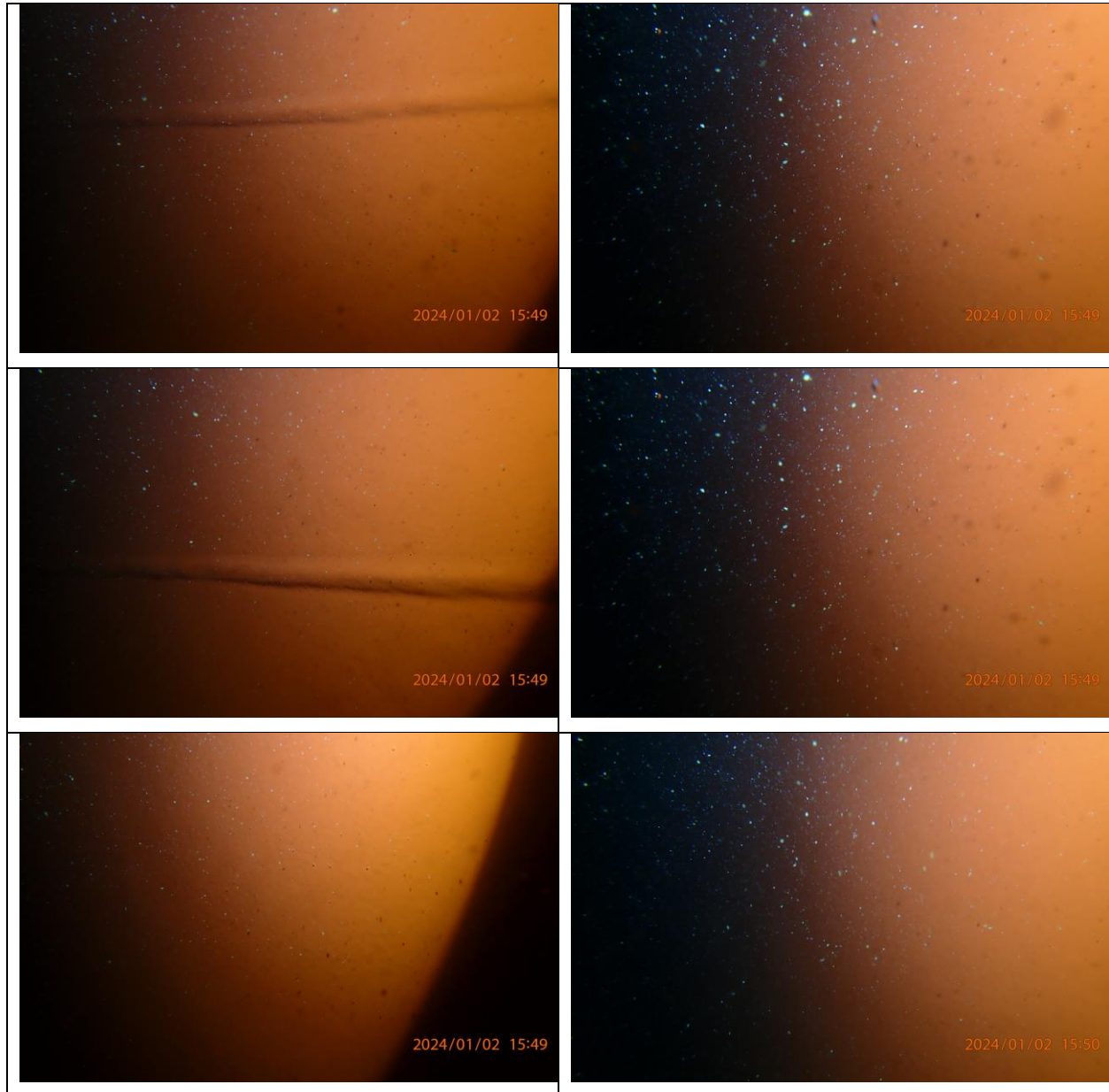
1. Port and starboard ICCP located aft was observed to be in good condition with no visible damage.
2. Sacrificial anodes remaining 10 - 20% remaining on the rudder. Scrubber total #03 was observed on the port side. No damage was observed.

CCTV Link: <https://www.dropbox.com/scl/fi/om8v3h3oisldgklxcjtq7/M.V-MORANDI.mp4?rlkey=f9e2ur61p9gfv7y5ntd5p7on&dl=0>



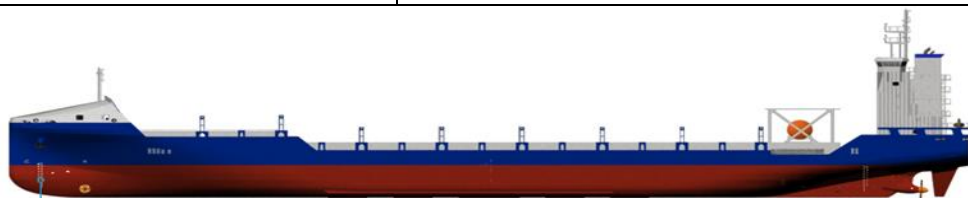
FORWARD AREA (STARBOARD) – VERTICAL SIDE

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



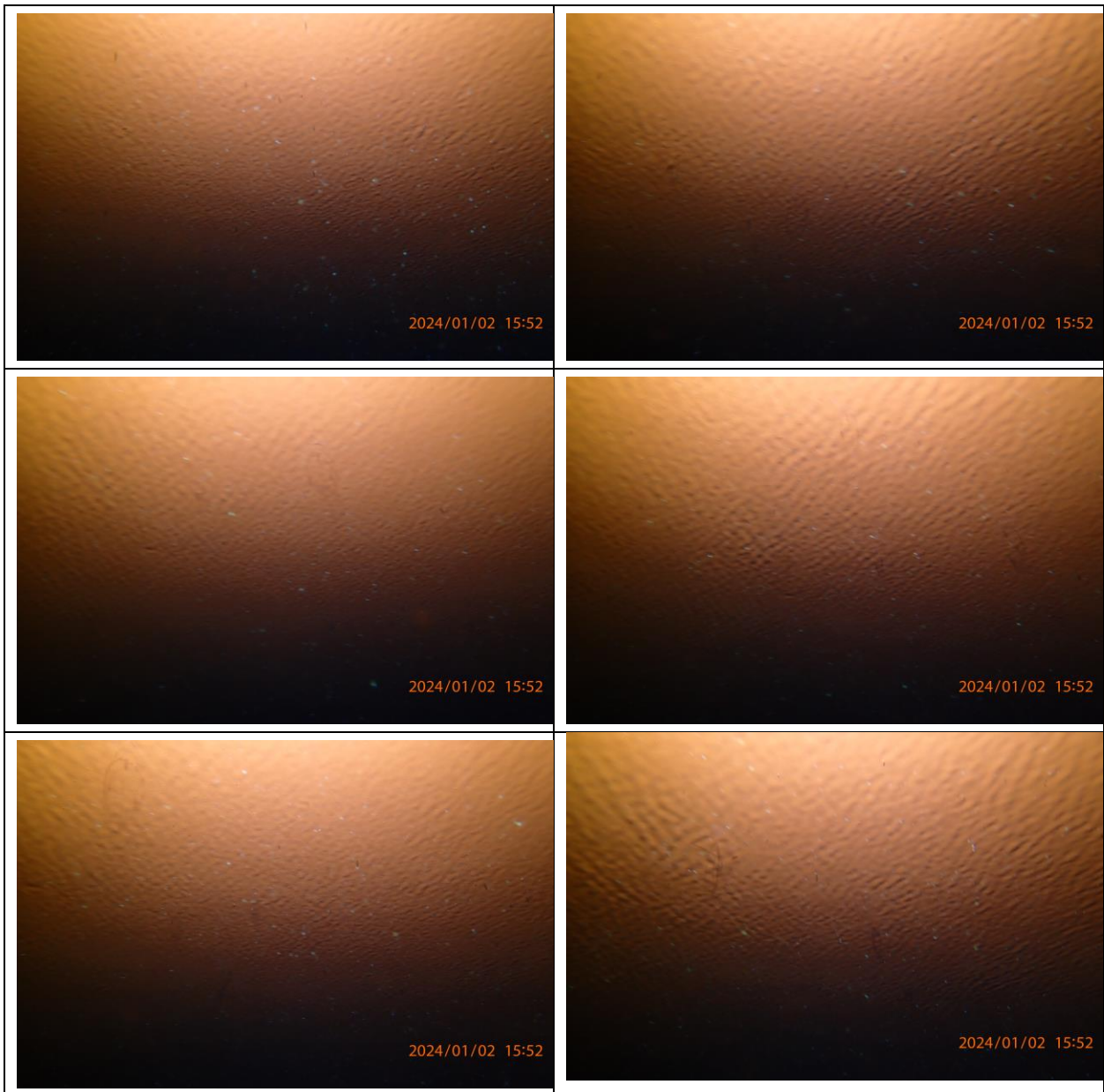
FORWARD AREA (PORT) – VERTICAL SIDE

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



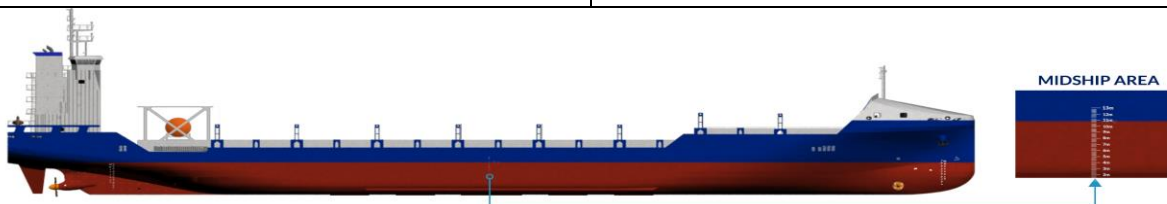
FORWARD AREA (BOTTOM)

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



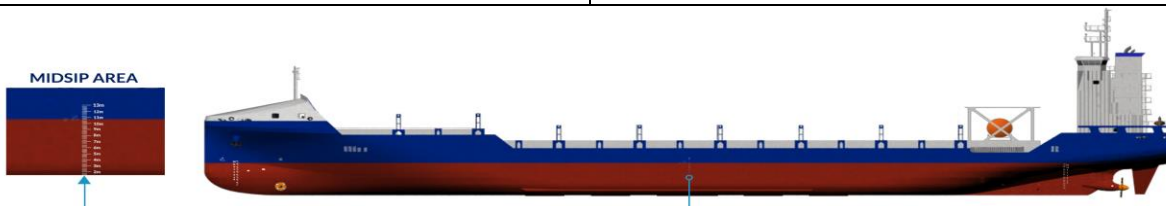
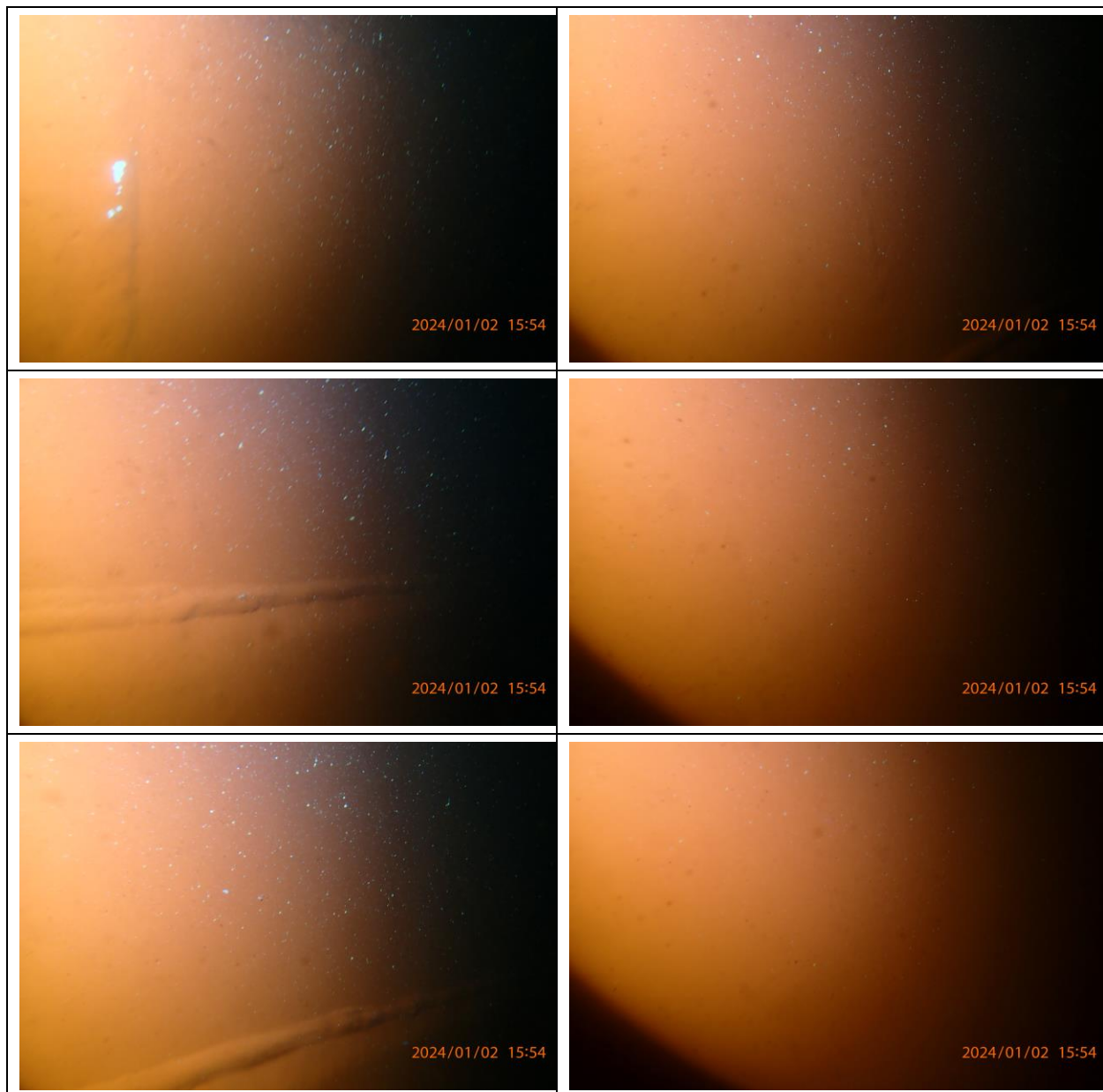
MIDSHIP AREA (STARBOARD) – VERTICAL SIDE

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



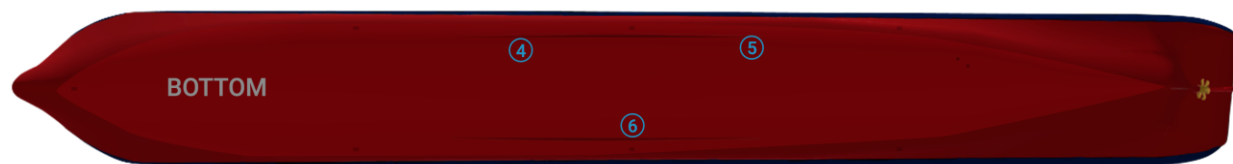
MIDSHIP AREA (PORT) – VERTICAL SIDE

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



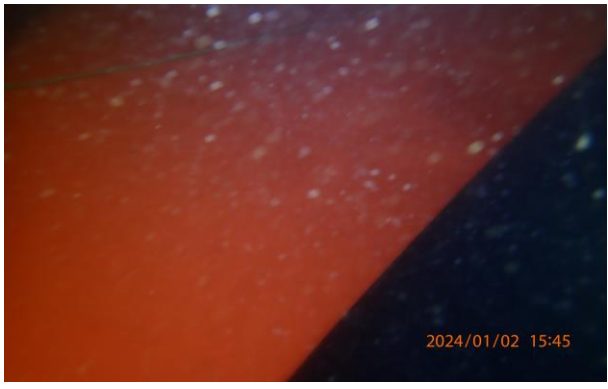

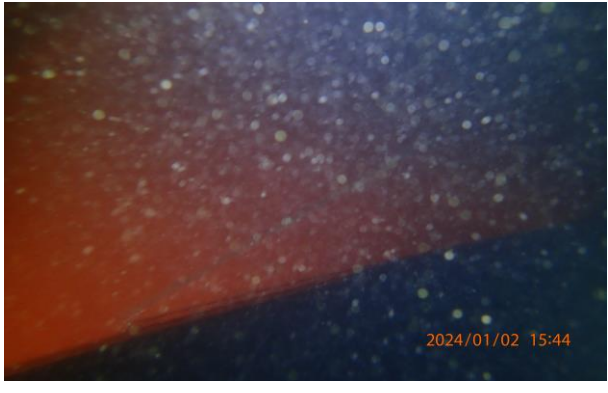



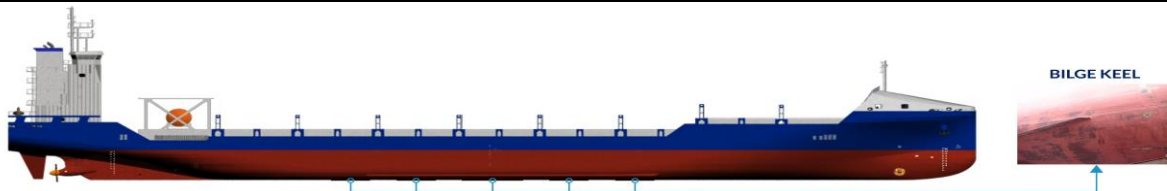
MIDSHIP AREA (BOTTOM)

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



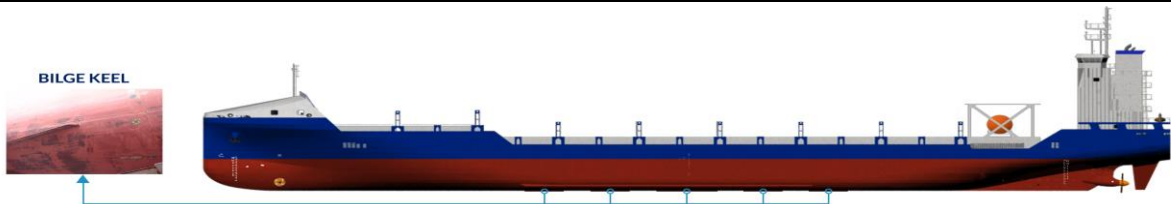
BILGE KEEL (STARBOARD)

INSPECTION PHOTOS	INSPECTION PHOTOS
	
	
	



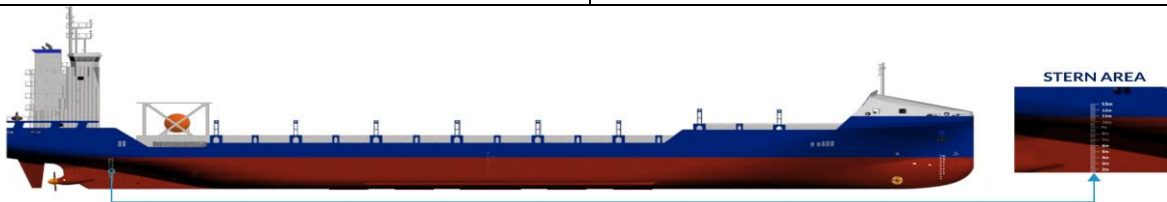
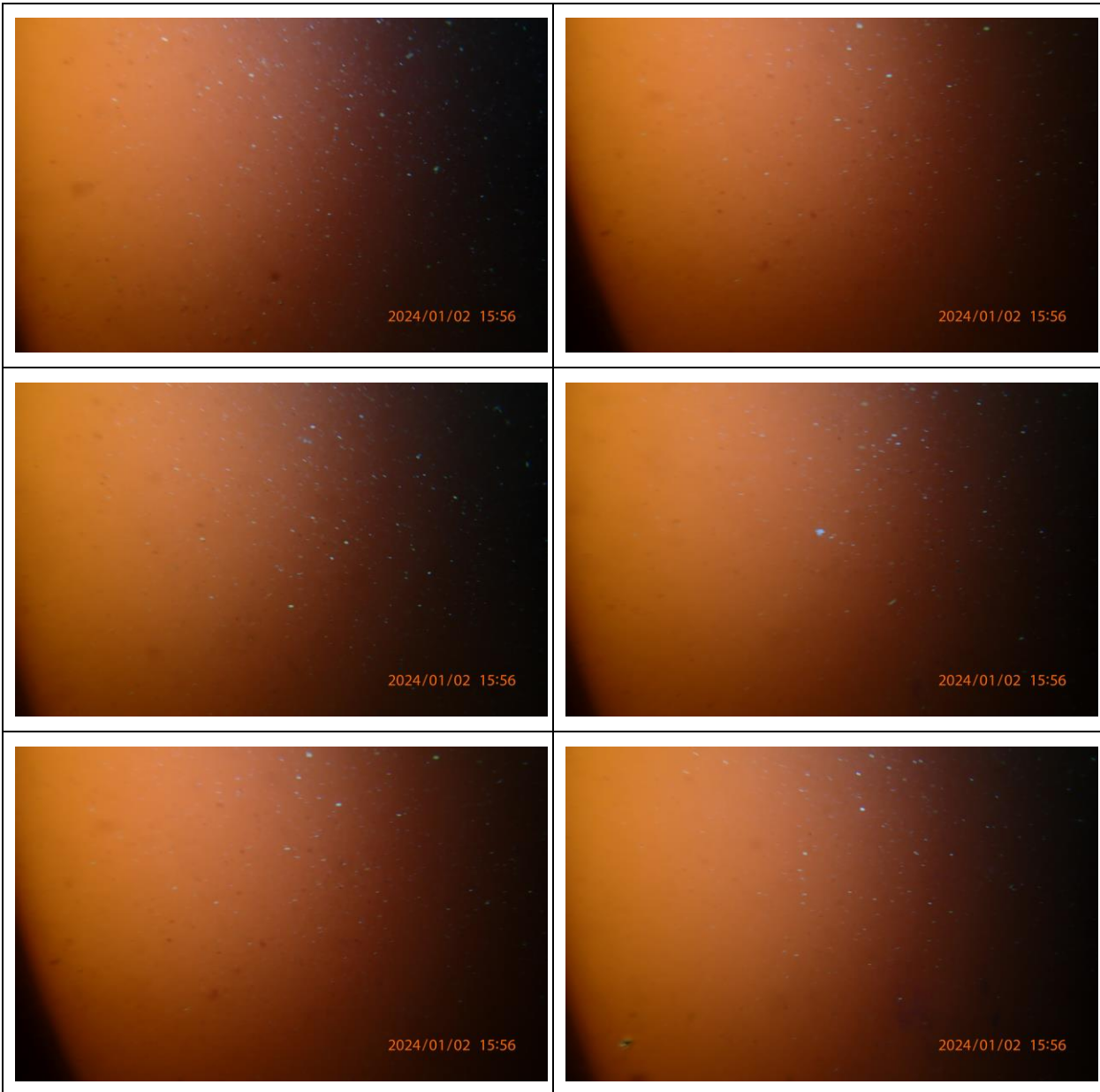
BILGE KEEL (PORT)

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------









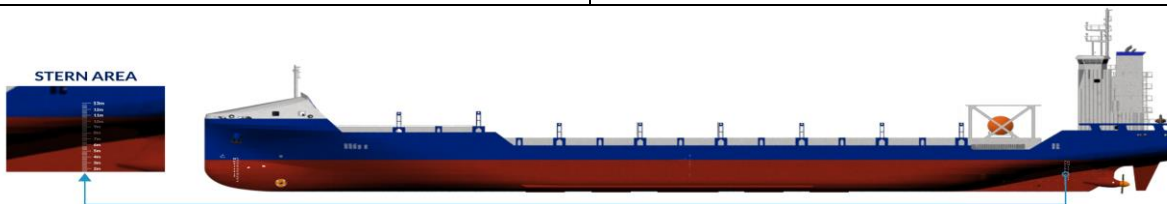
STERN AREA (STARBOARD) – VERTICAL SIDE

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------









STERN AREA (PORT) – VERTICAL SIDE

INSPECTION PHOTOS	INSPECTION PHOTOS
	
	
	

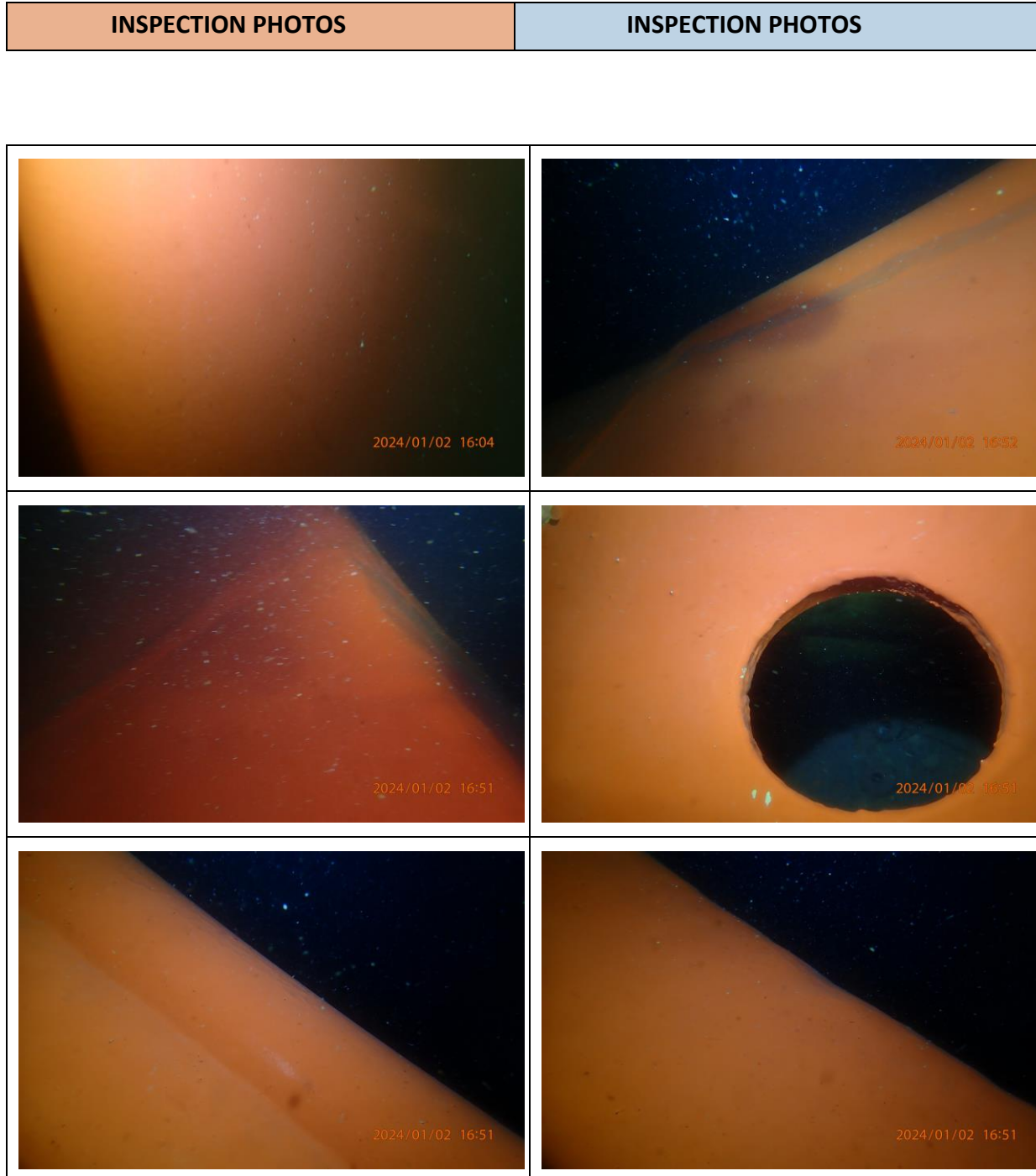


STERN AREA (BOTTOM)

INSPECTION PHOTOS	INSPECTION PHOTOS
	
	
	

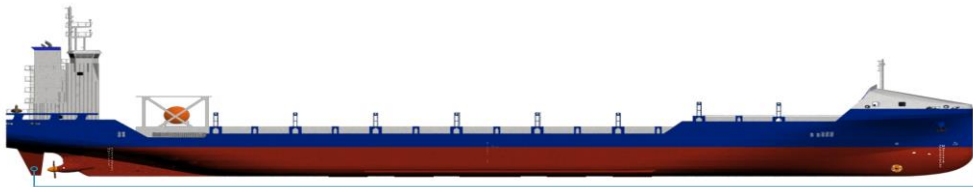
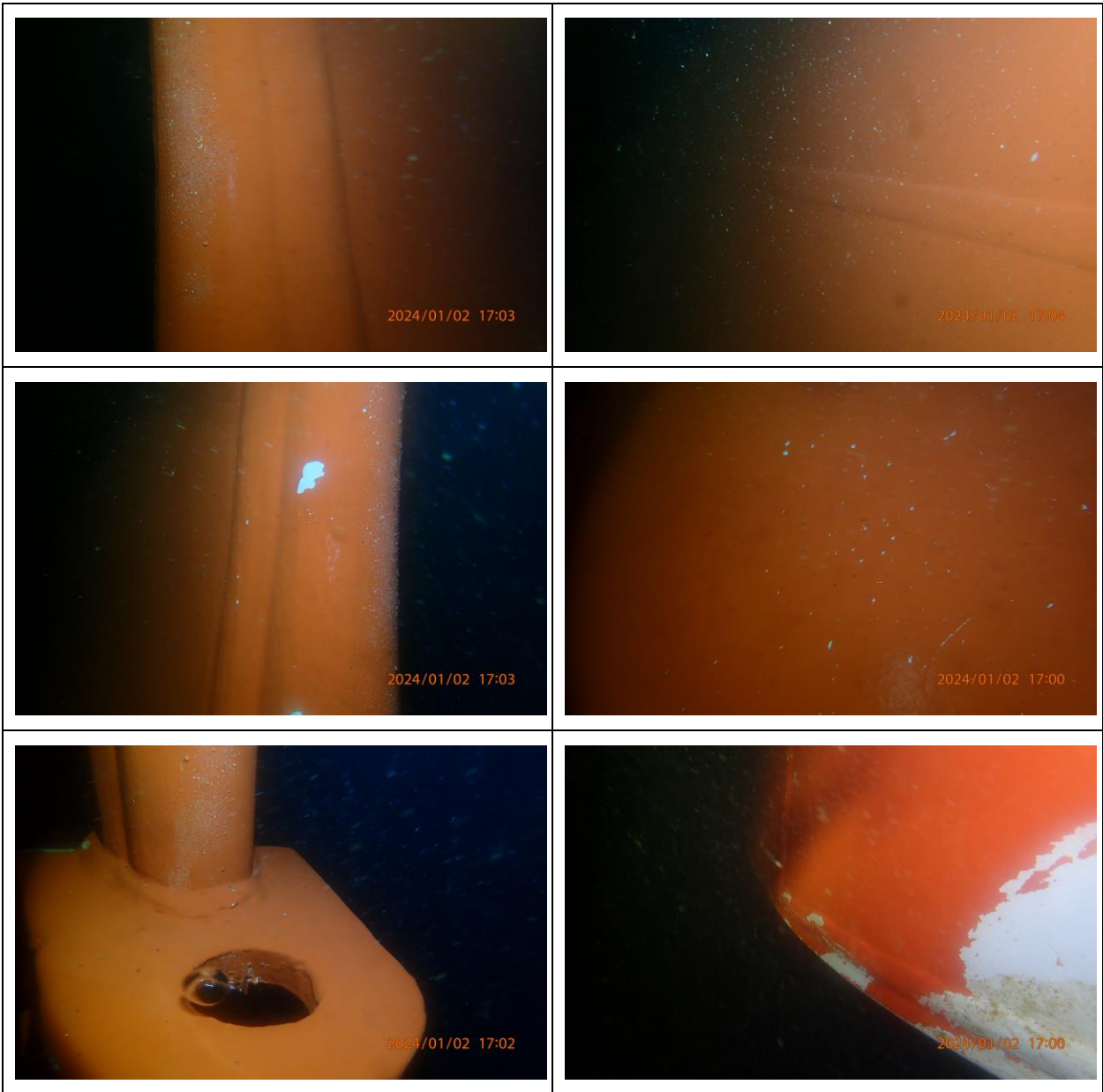


STERN FRAME/STERN TUBE



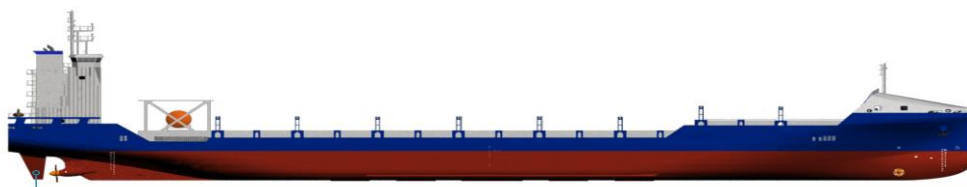
RUDDER

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



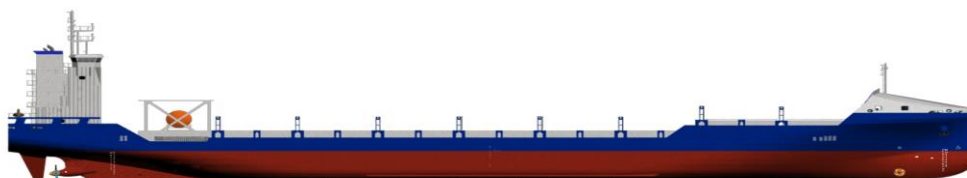
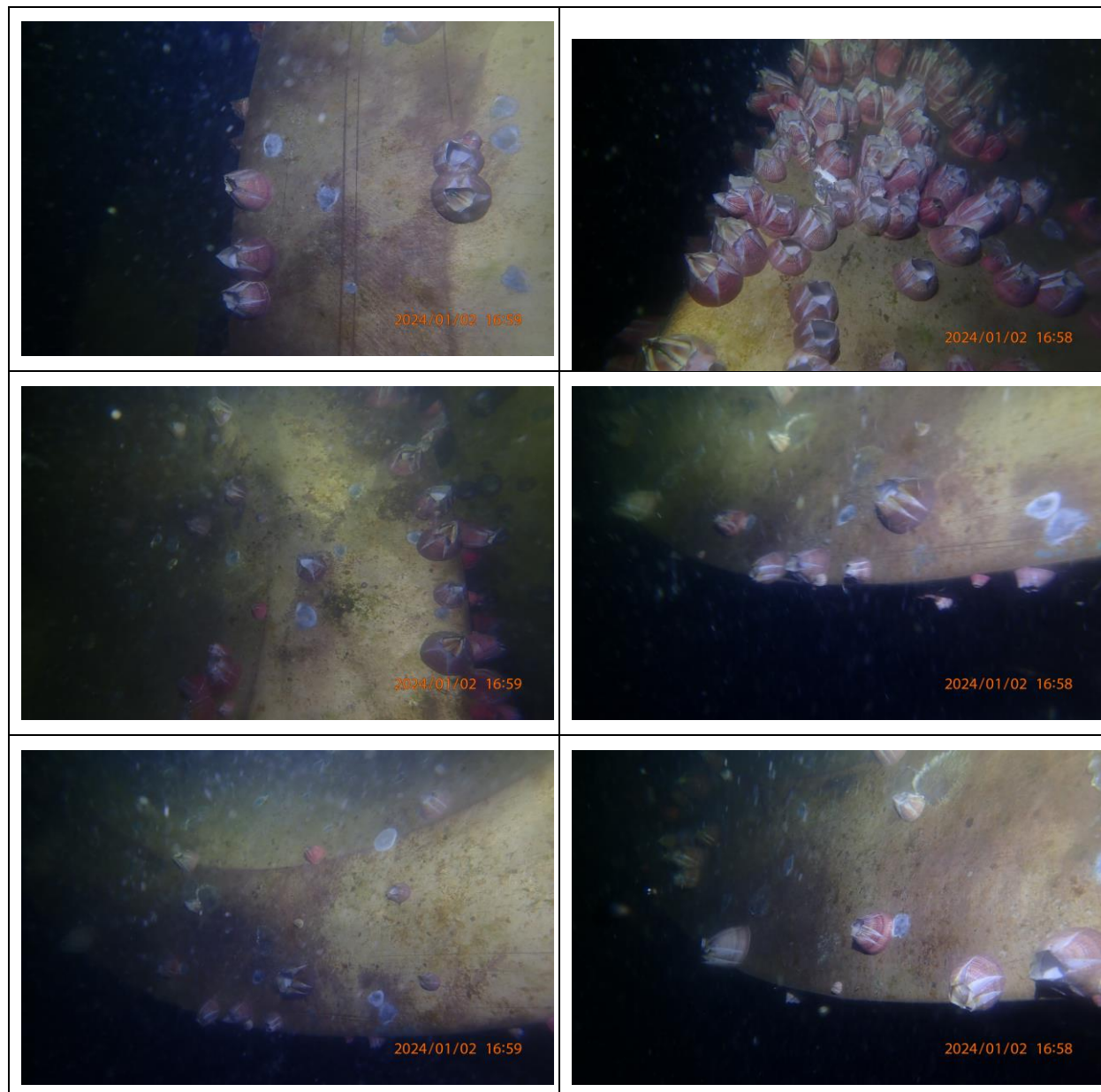
RUDDER

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



PROPELLER BLADES

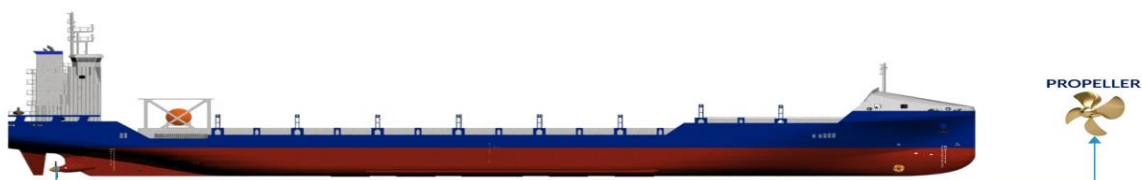
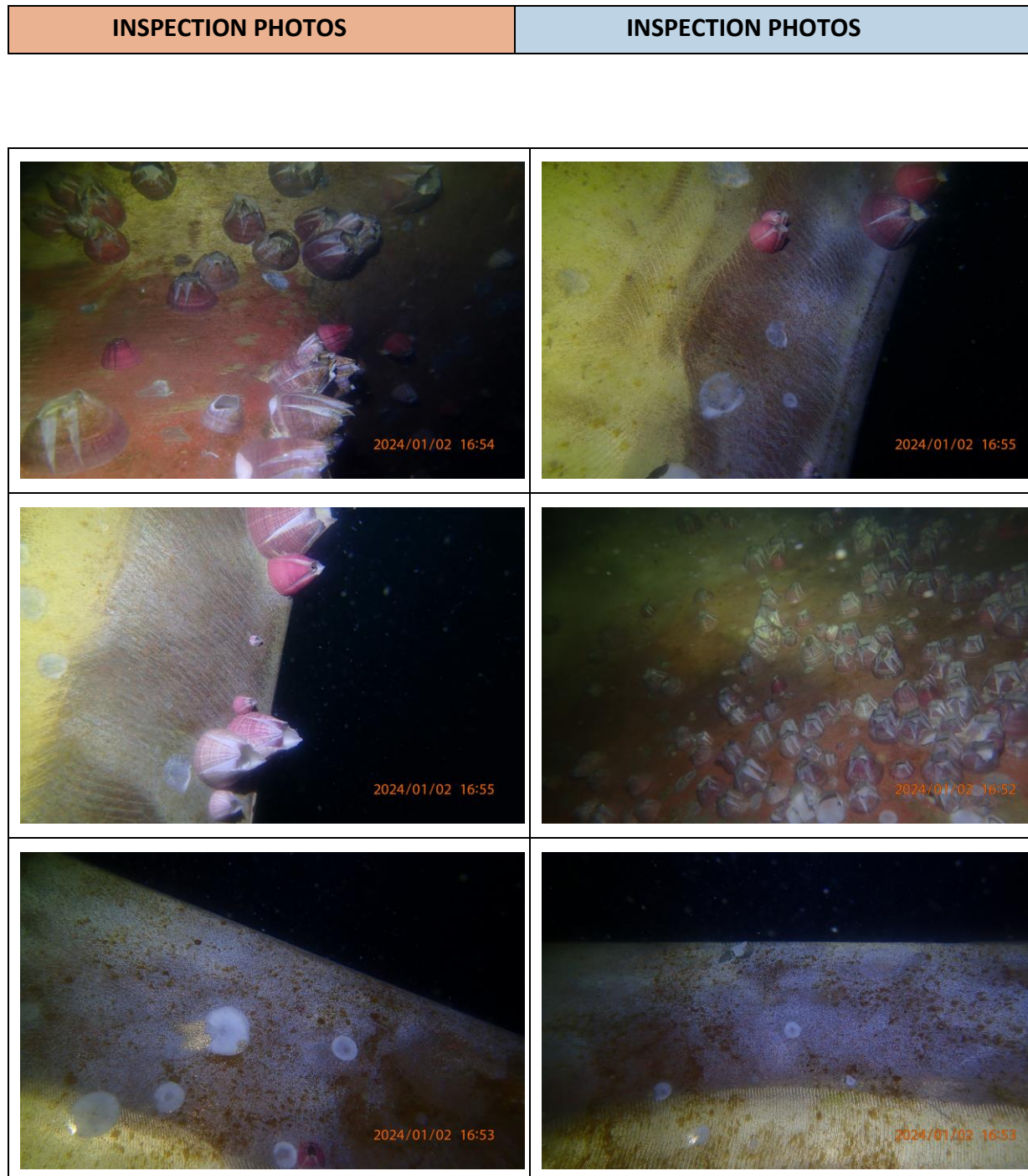
INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



PROPELLER

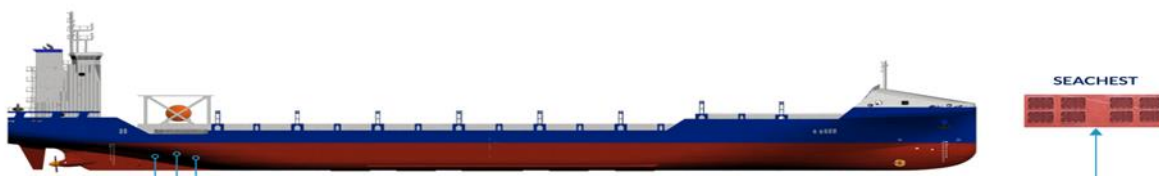
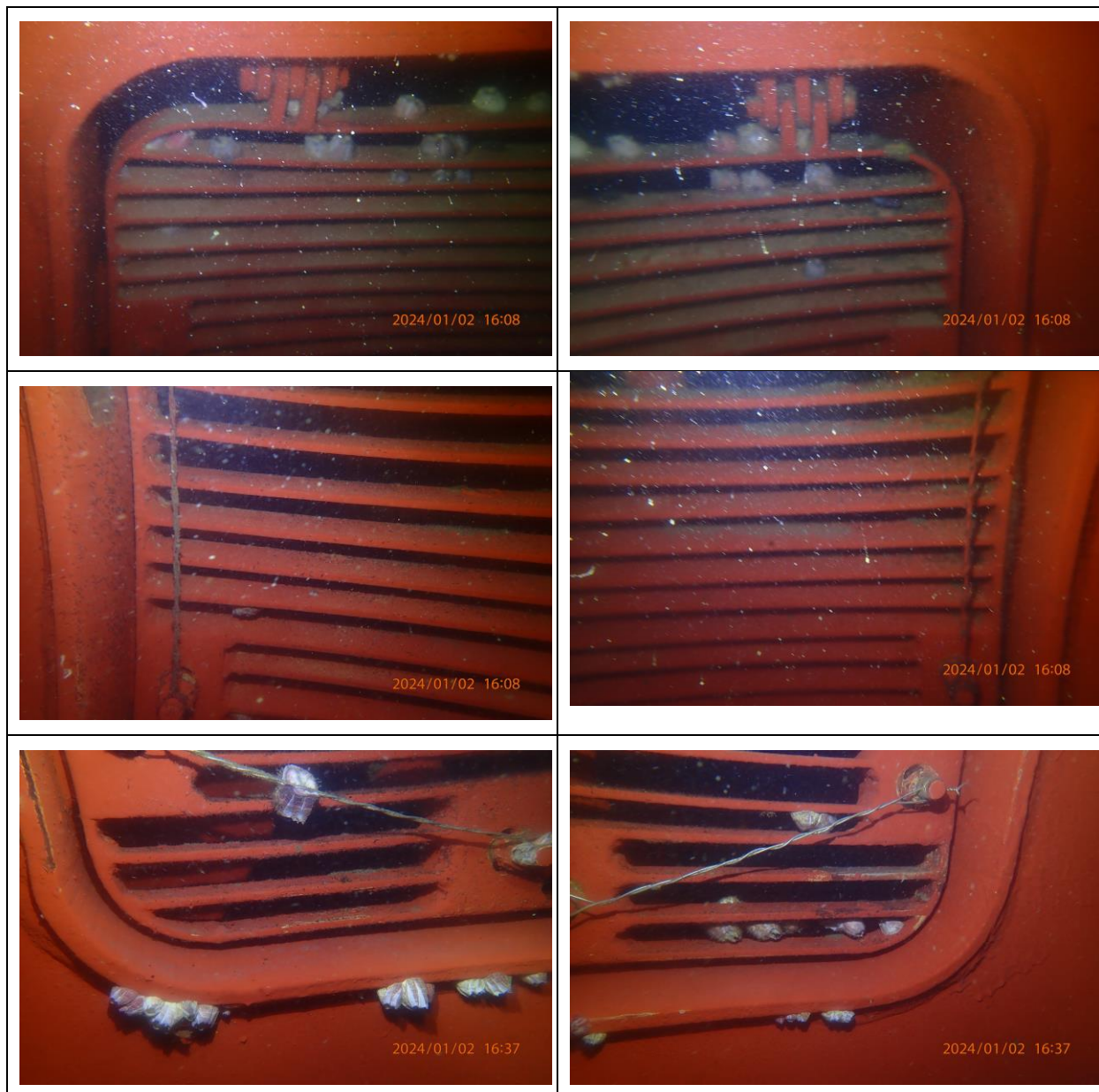


PROPELLER BLADES



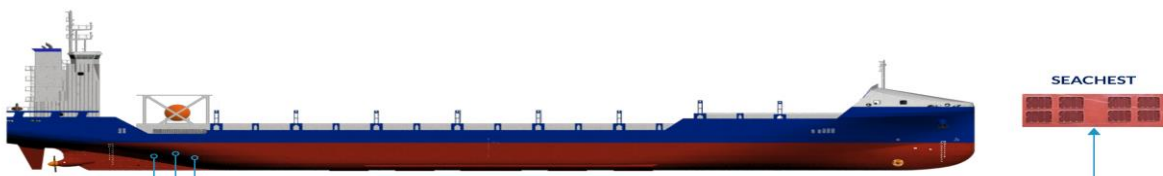
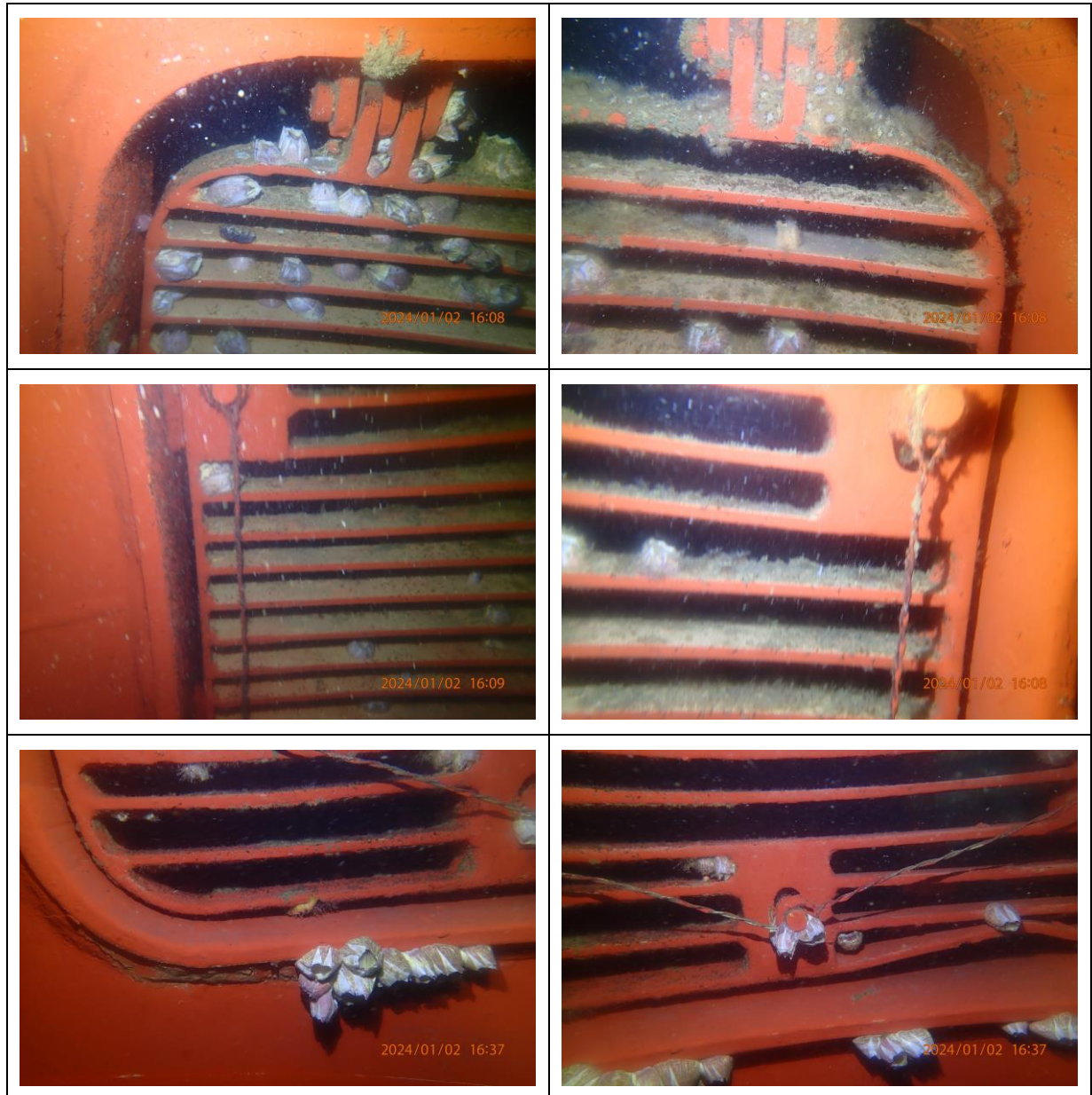
SEACHEST (STARBOARD) - GRATINGS

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



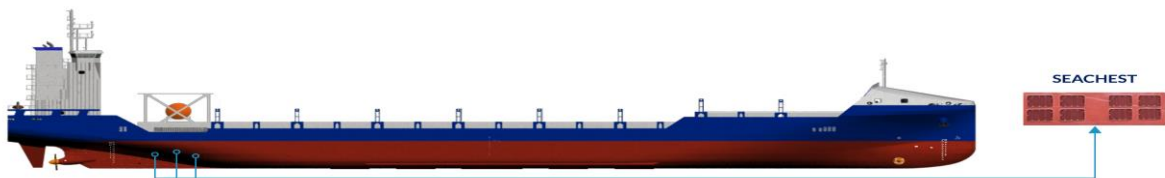
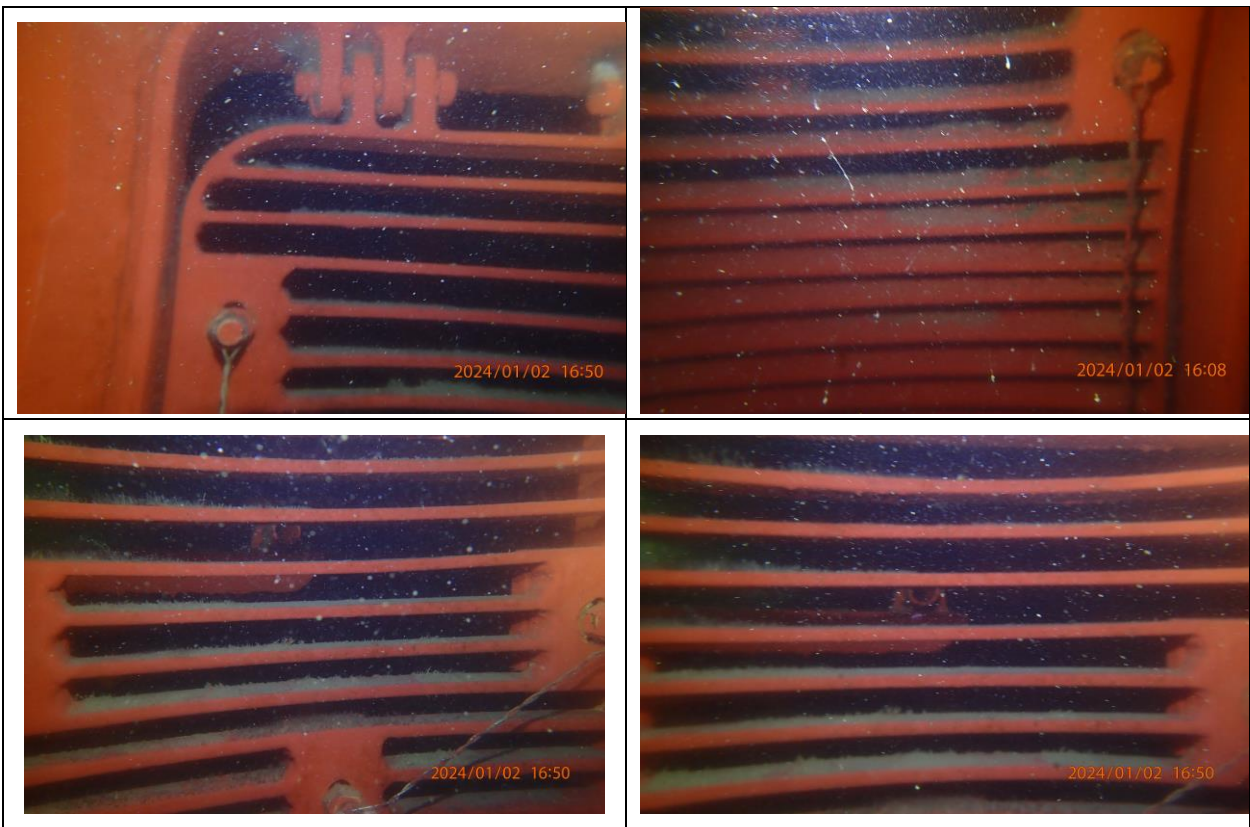
SEACHEST (PORT) – GRATINGS

INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



EMERGANCY FIRE PUMP – GRATINGS

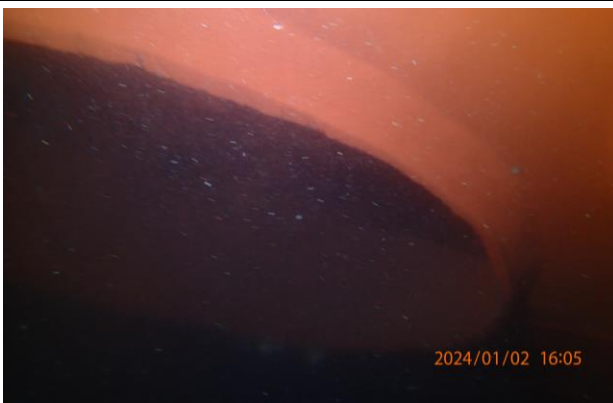
INSPECTION PHOTOS	INSPECTION PHOTOS
-------------------	-------------------



BOROSCOPE

INSPECTION PHOTOS

INSPECTION PHOTOS



DIVER'S REPORT



Doc No : Form-26	
Ver. Rev : 1.00	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

UNDERWATER SERVICE REPORT

F-26

Page 1 of 12

JOB NO : NSPL-01-24-1835

GENERAL DETAILS

Vessel:	MORANDI	Date:	02/02/2024
Dive Station:	NEREUS 2	Draft Fwd:	18Mtrs
		Aft:	19Mtrs
Location / Anchorage:	EASTERN BUNKERING CHARLIE ANCHORAGE		
Sea State:	CALM	Visibility:	POOR
		Current:	MODERATE
Berthing:	SHIPSIDE VESSEL	Class Society:	-
		Surveyor:	

MARINE FOULING CONDITION

Type: (1) Acorn Barnacle (2) Tubeworm (3) Gooseneck (4) Algae (5) Slime (6) Mussels (7) Calcareous (8) Others

LOCATION	TYPE (%)								SEVERITY	LENGTH HEIGHT			
	1	2	3	4	5	6	7	8					
Bulbous Bow (Port)									CLEAN	mm	% AREA		
Bulbous Bow (Starboard)									CLEAN	mm			
Bow Thruster Gratings									N/A	mm	BOW	MID	STERN
Verticals (Port)									CLEAN	mm	0	0	0
Verticals (Starboard)									CLEAN	mm	0	0	0
Bilge Keel (Port)									CLEAN	mm	0	0	0
Bilge Keel (Starboard)									CLEAN	mm	0	0	0
Flat Bottom									CLEAN	mm	0	0	0
Seachest Gratings (Port)	05			10	10				LIGHT	10mm			
Seachest Gratings (Starboard)	05			10	10				LIGHT	10mm			
Firepump Gratings	05			10	10				LIGHT	mm			
Stern Tube									CLEAN	mm			
Propeller	80			40	40		80		HEAVY	10mm			
Rudder	10								CLEAN	mm			

Enquiry : enquiry@nereussubsea.com

Web: www.nereussubsea.com



Doc No : Form-26	
Ver. Rev : 1.00	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

UNDERWATER SERVICE REPORT

F-26

Page 2 of 12

JOB ASSIGNMENT

Hull Cleaning: Yes ☐ No ☒ Propeller Polishing: Yes ☐ No ☐
Others: Class IWS / CCTV ☒ Visual Survey with Photos ☒ Others / Repair ☐

POST CLEANING REMARKS

Hull Cleaning Performed: Port Side ☐ Stbd Side ☐ Flat Bottom ☐ Rudder ☐
Sea Chest Gratings ☐ Bilge Keel ☐ Thruster(s) ☐ Propeller ☐
Successful Completion of Cleaning YES ☐ NO ☐
Post Cleaning Inspection YES ☐ NO ☐

Remarks:

PROPELLER

Diameter: No. of Blades:
Type: Single ☒ Twin ☐ Pitch ☐

PRE & POST PROPELLER POLISHING CONDITION:

PRESSURE SIDES (Rupert Scale Comparator Gauge)

Blade	1(A)	2(B)	3(C)	4(D)	5(E)	6(F)
Location						N/A
Remarks	N/A	N/A	N/A	N/A	N/A	N/A

SUCTION SIDES (Rupert Scale Comparator Gauge)

Blade	1(A)	2(B)	3(C)	4(D)	5(E)	6(F)
Location						N/A
Remarks	N/A	N/A	N/A	N/A	N/A	N/A

Enquiry : enquiry@nereussubsea.com

Web: www.nereussubsea.com



Doc No : Form-26	
Ver. Rev : 1.00	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

UNDERWATER SERVICE REPORT

F-26

Page 3 of 12

PROPELLER

Blade Condition Good ☒ Fair ☐ Poor ☐
Bolting Assembly Intact Yes ☐ No ☐ N.A. ☒

DESCRIPTION

Pitting Yes ☐ No ☒
Cavitation / Erosion Yes ☐ No ☒
Tears Yes ☐ No ☒
Cracks Yes ☐ No ☒
Previous Repairs Yes ☐ No ☒
Any Oil Leak from Blade Seal Yes ☐ No ☐ N.A. ☒

BOSS CONE

Condition Good ☒ Detective ☐
Cement Covers Intact ☒ Missing ☐ N.A. ☐
Bolting Assembly Intact ☒ Missing ☐ Covered ☒

PROPELLER SHAFT

Any Oil Leaking from Shaft Yes ☐ No ☒
Any Damage to Tailshaft Assembly Yes ☐ No ☒
Any Entanglement on Shaft Yes ☒ No ☐
If Yes, has It Been Removed Yes ☐ No ☐
Tailshaft Clearance Taken Yes ☐ No ☒
Tailshaft Reading Top: mm Bottom: mm
Have the Plugs Been Re-Secured Yes ☐ No ☐

Enquiry : enquiry@nereussubsea.com

Web: www.nereussubsea.com

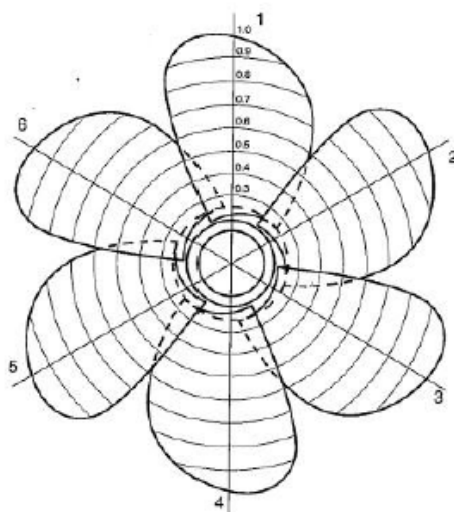
Doc No : Form-26	
Ver.Rev : 1.01	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

UNDERWATER SERVICE REPORT

F-26

Page 4 of 12

PROPELLER SKETCH REMARKS SHEET



Remarks: NO VISIBLE DAMAGE OBSERVED.

Enquiry : enquiry@nereussubsea.com

Web: www.nereussubsea.com



Doc No : Form-26	
Ver. Rev : 1.00	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

UNDERWATER SERVICE REPORT

F-26

Page 5 of 12

GENERAL HULL ASSESEMENT

PAINT CONDITION

Coatings

SPC ☒

Non SPC ☐

Silicone ☐

Condition

Good ☒

Fair ☐

Poor ☐

Paint Defects Description

(a) Peeling (b) Blistering (c) Cracking (d) Corrosion (e) Mechanical damage (f) Grounding damage

Remarks: NO VISIBLE DAMAGE OBSERVED.

HULL PLATING BELOW WATERLINE

Port Vertical Side Any Damage: Yes ☐

No ☒

Starboard Vertical Side Any Damage: Yes ☐

No ☒

Port Flat Bottom Any Damage: Yes ☐

No ☒

Keel Plate Any Damage: Yes ☐

No ☒

Starboard Flat Bottom Any Damage: Yes ☐

No ☒

Enquiry : enquiry@nereussubsea.com

Web: www.nereussubsea.com

Doc No : Form-26	
Ver. Rev : 1.00	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

UNDERWATER SERVICE REPORT

F-26

Page 6 of 12

GENERAL HULL ASSESMENT

Condition of Weld Seams on Hull

Good ☒

Satisfactory ☐

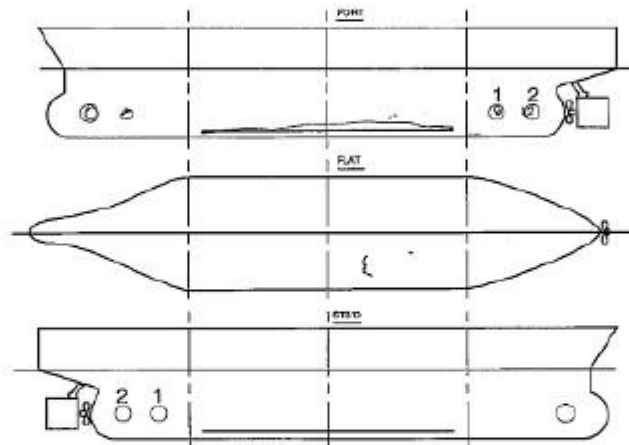
Poor ☐

Any Visible Cracks

Yes ☐

No ☒

Hull Plating Below Waterline Damage Remarks Page



Remarks: NO VISIBLE DAMAGE OBSERVED.

Doc No : Form-26	
Ver. Rev : 1.00	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

UNDERWATER SERVICE REPORT

F-26

Page 7 of 12

GENERAL HULL ASSESSMENT

BILGE KEEL

No. of Section(s) each Side:

Port Bilge Keel:	Any anodes on bilge keel	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Any damage	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Any cracks on weld joint	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Anodes remaining:	N.A	
Stdb Bilge Keel:	Any damage	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Any cracks on weld joint	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Anodes remaining:	N.A	

Remarks: NO VISIBLE DAMAGE OBSERVED.

07 Section(s) each side: 08 SERIES

ROPE GUARD COVER

Condition	Good <input checked="" type="checkbox"/>	Fair <input type="checkbox"/>	Poor <input type="checkbox"/>
Type	Welded <input checked="" type="checkbox"/>	Bolted <input type="checkbox"/>	N.A. <input type="checkbox"/>
Access Hole	Top <input checked="" type="checkbox"/>	Bottom <input checked="" type="checkbox"/>	Covered <input type="checkbox"/>
Are Cutters Intact	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N.A. <input type="checkbox"/>

Remarks: NO VISIBLE DAMAGE OBSERVED. ENTANGLEMENT FOUND IN ROPE GUARD.

Doc No : Form-26	
Ver. Rev : 1.00	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

UNDERWATER SERVICE REPORT

F-26

Page 8 of 12

GENERAL HULL ASSESMENT

STERN FRAME ARCH AREA

General casting condition	Good <input checked="" type="checkbox"/>	Defective <input type="checkbox"/>
Weld seam to rudder	Good <input checked="" type="checkbox"/>	Defective <input type="checkbox"/>
Weld seam to hull	Good <input checked="" type="checkbox"/>	Defective <input type="checkbox"/>
Weld seam to skeg remarks	Good <input type="checkbox"/>	Defective <input type="checkbox"/>

Remarks: NO VISIBLE DAMAGE OBSERVED. NO SKEG OBSERVED

SEA CHEST GRATINGS

Number of Seachest	Port <u>02</u>	Starboard <u>02</u>	Fire Pump <u>01</u>
Type	Swing Hinged <input type="checkbox"/>	Bolted <input checked="" type="checkbox"/>	
Gratings	Good <input checked="" type="checkbox"/>	Defective <input type="checkbox"/>	
Condition	Good <input checked="" type="checkbox"/>	Defective <input type="checkbox"/>	
Seizing wires	Good <input checked="" type="checkbox"/>	Defective <input type="checkbox"/>	

Remarks: NO VISIBLE DAMAGE OBSERVED.

EFP: LOCATED STARBOARD SIDE

OVERBOARD DISCHARGE

Condition of O/D	Good <input checked="" type="checkbox"/>	Defective <input type="checkbox"/>
------------------	--	------------------------------------

CATHODIC PROTECTION SYSTEM

Sacrificial Anodes	Located Fwd <input type="checkbox"/>	Mid <input type="checkbox"/>	Aft <input type="checkbox"/>	Rudder <input checked="" type="checkbox"/>
Percentage Remaining				
Port ICCP	Located Fwd <input type="checkbox"/>	Aft <input checked="" type="checkbox"/>	Damaged: Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Starboard ICCP	Located Fwd <input type="checkbox"/>	Aft <input checked="" type="checkbox"/>	Damaged: Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Remarks: NO VISIBLE DAMAGE OBSERVED.

Sacrificial anodes remaining 10 - 20% remaining on rudder. Scrubber total #03 observed on port side. No damage observed



Doc No : Form-26	
Ver. Rev : 1.00	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

UNDERWATER SERVICE REPORT

F-26

Page 9 of 12

THRUSTERS

Bow Thrusters Available ☐ N.A. ☒

No. of Blades: 04 Condition: Good ☐ Defective ☐

Any Visible Oil Leak Yes ☐ No ☐

Grating Condition Good ☐ Defective ☐

Grating Type Bolted ☐ Welded ☐

Remarks: N/A

RUDDER

Rudder Horn any Visible Damages Yes ☐ No ☒

Rudder Stock any Visible Damages Yes ☐ No ☒

Plate Condition Good ☒ Fair ☐ Poor ☐

Any Visible Cracks Yes ☐ No ☒

Rudder Plugs no(s): 01 Intact ☒ Not Intact ☐

Rudder Pintle Clearance Taken Yes ☐ No ☒

Top Reading:

Forward (1) N/A

(2)

Aft (3) N/A

(4)

Port (5) N/A

(6)

Starboard (7) N/A

(8)

Bottom Reading:

Forward (1) N/A

(2)

Aft (3) N/A

(4)

Port (5) N/A

(6)

Starboard (7) N/A

(8)

Enquiry : enquiry@nereussubsea.com

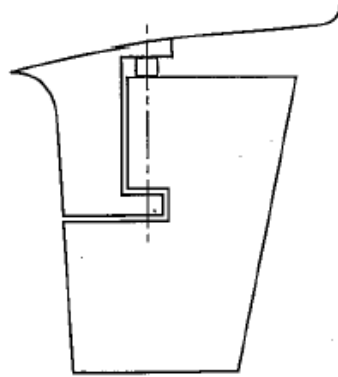
Web: www.nereussubsea.com

Doc No : Form-26	
Ver. Rev : 1.00	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

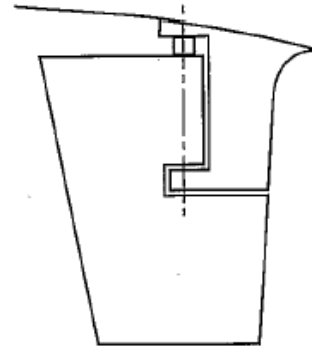
UNDERWATER SERVICE REPORT

F-26

Page 10 of 12



PORT



STB'D

Remarks: NO VISIBLE DAMAGE OBSERVED.

Enquiry : enquiry@nereussubsea.com

Web: www.nereussubsea.com



Doc No : Form-26	
Ver. Rev : 1.00	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

UNDERWATER SERVICE REPORT

F-26

Page 11 of 12

OPERATIONAL DETAILS

Work boat: NEREUS 2

Time / date alongside: 1410HRS 02/02/2024 Time / date departed: 2350HRS 02/02/2024

This is to certify that the job assignment has been satisfactorily completed as to the best of our ability.

Comments: JOB COMPLETED:

1)CLASS CCTV WITNESS BY PAINT INSPECTOR

2)STILL PHOTO INSPECTION

3)BOROSCOPE X3 SCRUBBER

Master's Endorsement CAPT. ESPENZO NICKANOR JR C.


02/02/2024
(Name / Signature / Stamp / Date)

Class Surveyor Acknowledgement

02/02/2024

(Name / Signature / Stamp / Date)

Diving Supervisor Acknowledgement

ZUHAIRI



02/02/2024

(Name / Signature / Stamp / Date)

Enquiry : enquiry@nereussubsea.com

Web: www.nereussubsea.com



Doc No : Form-26	
Ver. Rev : 1.00	Prepared by: GM
Issue Date: 25/05/2020	Approved by: MD

UNDERWATER SERVICE REPORT

F-26

Page 12 of 12

Masters Feedback Form - (It will take less than 5 minutes to fill the form)

Please provide rating by placing "X" in the corresponding box	Very Good	Good	Fair	Poor	Very Poor
How would rate overall customer experience ?		X			
How satisfied were you with the safety awareness of diving Staff ?		X			
How satisfied were you with communication throughout the operations ?		X			
How satisfied were you with timeliness of delivery ?		X			
Would you recommend your Management / Owners to utilize our services for other vessels of the fleet ?	Strongly Recommended <input type="checkbox"/> Recommended <input checked="" type="checkbox"/> Do not recommend <input type="checkbox"/>				
Please provide any additional comments or suggestions :	<div style="text-align: right;">   </div> <p>CAPT. ESTENZO, NICANDOR JR.</p> <p style="text-align: right;">02/02/2024</p>				