AMERICAN BUREAU OF SHIPPING

CHECK SHEET ON SOLAS SURVEYS-SLR/GMDSS

(ORIGINAL TO BE RETAINED ONBOARD UNTIL NEXT SURVEY)

VESSEL SEACOR POWER CLASS NO. 0241696

Associated REPORT NO. 11611 DATE FEBRUARY 3, 2021

RADIO TECHNICIANS SURVEY[1]

PORT OF REGISTRY NEW ORLEANS,LA

CALL SIGN WDG3592 MMSI NUMBER 367527630

IMO NUMBER 8765682 OFFICIAL NUMBER 1115290

TELEX ID NUMBER (NBDP) 367527630 SCPR X INMARSAT ID NUMBERS 436956910

ADDITIONAL NUMBERS

SEA AREA(s) IN WHICH VESSEL IS CERTIFIED TO OPERATE:* A1 ☒ A2 ☒ A3 ☒ A4 ☐

		YES	NO	N/A
1.	The following test instruments used:			
a.	Frequency counter.	☒	☐	
b.	Watt meter with plug in elements covering MF, HF, and VHF	☒	☐	
c.	Ampere/Volt/Ohm meter.	☒	☐	
d.	Insulation resistance tester.	☐	☒	
e.	Acid tester (specific gravity).	☐	☒	
f.	Instrument for decoding the ID-signal of satellite EPIRBs.	☒	☐	
g.[2]	Spectrum analyzer.	☐	☐	☒
h.[2]	Oscilloscope.	☐	☐	☒
I.[2]	Deviation meter.	☐	☐	☒
j.[2]	Demute tester for testing the radiotelephone distress frequency watch receiver (2182 kHz).	☐	☐	☒
The following items were checked and tested as necessary and found satisfactory.				
2.	Source of energy.			
a.	Checked main source of energy available in accordance with requirements.	☒	☐	
b.	Emergency source of energy: (specify below) capacity (Hrs & kW): 190KW 48HRS location: 03 LEVEL			
c.	Reserve source of energy:(specify below) capacity: GEL CELL BATTERIES 220AH location: AFT WHEELHOUSE OUTSIDE			
3.	Radio installations			
a.	The radio controls for operating the radio installation are adequately illuminated.	☒	☐	
b.	The capacity of battery(s) has been checked at intervals not exceeding 12 months.	☒	☐	
c.	Electrical lighting is permanently arranged and connected to a source of power independent of the main/emergency source of power.	☒	☐	
d.	Radio installation clearly marked with call sign, ship station identity, and other applicable codes.	☒	☐	
e.	Radio equipment is located at: STRB. SIDE OF BRIDGE			
f.	Remote control from conning position provided.	☐	☐	☒

[1] The following part of the survey should always be performed by a fully qualified Radio Technician using properly calibrated equipment, who has adequate knowledge of the Radio Regulations, the SOLAS Convention, as amended, and the IMO performance standards for radio equipment.

* Check all that apply

[2] This test equipment may also be used but is not mandatory.

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		YES	NO	N/A
4.	Equipment installed fulfills the functional requirements for the vessel's sea areas of operation.	☒	☐	
5.[3]	Method of availability of functional requirements.			
a.	Duplication of equipment.	☒		☐
b.	Shore-based maintenance (copy of contract verified on board).	☒		☐
c.	At-sea maintenance.	☐		☒
6.	Antennas.			
a.	Was a visual inspection of all antennas including, INMARSAT, GPS and AIS VHF antennas, and feeders for satisfactory siting (including consideration of any possible interference) and defects made?	☒	☐	
b.	Checked that arrangements are provided enabling MF/HF transmitting antennas to be grounded.	☒	☐	
c.	Checked that the MF/HF transmitting antennas are protected against being touched accidentally.	☒	☐	
d.	For NIS ships, transmitting results to be tested with MEGGER. MEGOHM (>50 MOHM dry, >5 humid)			☒
7.	Reserve source of energy.			
a.	Checking there is sufficient capacity to operate the basic or duplicated equipment for 1 hour or 6 hours as appropriate (Regulation IV/3). **Specify 1 or 6 hours:** 6 hrs	☒	☐	
b.	If reserve source of energy is a battery, specify type: 4 12VDC 55AH GEL CELL :			☐
1)	Checked its siting and installation. Specify location: AFT WHEEL HOUSE DECK OUTSIDE	☒	☐	
2)	Checked for defects, including all cables.	☒	☐	
3)	Checked its condition by specific gravity measurement or voltage measurement. Specify voltage 27.2 VDC or specific gravity:	☒	☐	
4)	With battery off charge, and the maximum required radio installation load connected to the reserve source of energy, checked the battery voltage and discharge current. Specify maximum discharge current: 20 AMPS voltage 25.2 VDC	☒	☐	
5)	Checked that the charger(s) are capable of recharging the reserve battery within 10 hours.	☒	☐	
6)	Checked that battery charger is of an automatic type.	☒	☐	
8.	VHF transceivers:			

	BASIC	DUPLICATION
Make / Model:	Furuno FM-8800	Furuno FM8800

a.	Checked for operation on channels 6, 13, and 16.	☒	☐	
b.	Checked that equipment is within frequency tolerance.	☒	☐	
c.	Checked RF power output and VSWR on channels 6, 13, and 16.	☒	☐	
d.	Checked correct operation of all controls including priority of control units.	☒	☐	
e.	Checked that the equipment operates from the main, emergency (if provided), and reserve sources of energy.	☒	☐	
f.	Checked operation of the VHF control unit(s) or portable VHF equipment provided for navigational safety from bridge wings.	☒	☐	
g.	Checked for correct operation by on-air contact with a coast station or other ship.	☒	☐	
h.	Checked compliance with IMO performance standards.	☒	☐	

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[3] Ships engaged on voyages in sea area A3 and A4 must use a combination of two methods (check all that apply)

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		YES	NO	N/A
9.	VHF DSC controller and Channel 70 DSC watch receiver.			

	BASIC	DUPLICATION
Make / Model:	Furuno FM-8800	Furuno FM-8800

a.	Performed an off-air check confirming the correct Maritime Mobile Service Identity is programmed in the equipment.	☒	☐	
b.	Checked for correct transmission by means of a routine or test call to a coast station, other ship, on board duplicate equipment or special test equipment.	☒	☐	
c.	Checked for correct reception by means of a routine or test call from a coast station, other ship, on board duplicate equipment, or special test equipment.	☒	☐	
d.	Checked the audibility of the VHF/DSC alarm.	☒	☐	
e.	Checked that the equipment operates from the main, emergency (if provided) and reserve sources of energy.	☒	☐	
f.	Checked that the ship's position in the distress alert is automatically provided with this information from an internal or external navigation receiver (e.g. GPS)	☒	☐	
g.	Checked for compliance with IMO performance standards.	☒	☐	
h.	Checked DSC alerting available from conning position.	☒	☐	
i.	Checked that DSC distress procedure and DSC number are clearly displayed near the unit.	☒	☐	
10.	MF radiotelephone equipment, or	☐	☒	
	MF/HF[4] radiotelephone equipment.	☒	☐	

	BASIC	DUPLICATION
Make / Model:	FURUNO FS-1570	N/A

a.	Checked that the equipment operates from the main, emergency (if provided), and reserve sources of energy.	☒	☐	
b.	Checked antenna tuning in all appropriate bands.	☒	☐	
c.	Checked that equipment is within frequency tolerance on all appropriate bands (10 Hz).	☒	☐	
d.	Checked for correct operation by contact with a coast station and/or measure RF power output and VSWR.	☒	☐	
e.	Checked receiver performance by monitoring known stations on all appropriate bands.	☒	☐	
f.	Checked that the control unit on the bridge has first priority for the purpose of initiating distress alerts, if control units are provided outside the navigational bridge.	☒	☐	☐
g.	Checked for compliance with IMO performance standards.	☒	☐	
11.	MF/HF[4] radio telex equipment			☐

	BASIC	DUPLICATION
Make / Model:	FURUNO FS-1570	N/A

a.	Checked that the equipment operates from the main, emergency (if provided), and reserve sources of energy.	☒	☐	
b.	Confirmed that the correct selective calling number is programmed in the equipment.	☒	☐	
c.	Checked correct operation by inspection of recent hard copy or by a test with a coast radio station.	☒	☐	
d.	Checked for compliance with IMO performance standards.	☒	☐	

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[4] HF radiocommunication equipment capable of operating narrow-band direct printing (NBDP) should be updated so that following the first radio survey after 1 January 2017, it meets the channelling arrangements reflected in sections II and III of part B in appendix 17 of the Radio Regulations.

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	YES	NO	N/A
12. MF DSC controller(s), or MF/HF DSC controller(s).	☐ ☒	☒ ☐	

	BASIC	DUPLICATION
Make / Model:	FURUNO FS-1570	N/A

a.	Checked that equipment operates from the main, emergency (if provided), and reserve source of energy.	☒	☐
b.	Confirmed that the correct Maritime Mobile Service Identity is programmed in the equipment.	☒	☐
c.	Checked the off air self test program.	☒	☐
d.	Checked operation by means of a test call on MF and/or HF to a coast radio station if the rules of the berth permit the use of MF/HF transmissions.	☒	☐
e.	Checked the audibility of the MF/HF DSC alarm.	☒	☐
f.	Checked that the ship's position in the distress alert is automatically provided with this information from an internal or external navigation receiver (e.g. GPS)	☒	☐
g.	Checked for compliance with IMO performance standards.	☒	☐
h.	Checked DSC alerting available from conning position.	☒	☐

13.	MF DSC watch receiver(s), or MF/HF DSC watch receiver (s).	☐ ☒	☒ ☐

Make/model: FURUNO FS-1570

a.	Confirmed that only DSC channels indicated in Regulations IV/9, 10, 11, and 12 are being monitored.	☒	☐
b.	Checked that a continuous watch is being maintained while keying MF/HF radio transmitters.	☒	☐
c.	Checked for correct operation by means of a test call from a coast station or other ship.	☒	☐

14. INMARSAT Ship Earth Station(s)

	NR 1	NR 2	NR 3
Make/Model:	FURUNO FELCOM 15		

Specify Type: B ☐ C ☒ F77 ☐ Specify Basic or Duplication or Both: Basic

a.	Checked that equipment operates from the main, emergency (if provided), and reserve sources of energy, and that	☒	☐	
b	where an uninterrupted supply of information from the ship's navigational or other equipment is required, ensuring such information remains available in the event of failure of the ship's main or emergency source of electrical power.	☒	☐	☐
c.	Checked the distress function by means of an approved test procedure, where possible.	☒	☐	
d.	Checked for correct operation by inspection of recent hard copy of test call by telex or telephone.	☒	☐	
e.	Checked distress function only if permitted to carry out test by the coast earth station.	☒	☐	
f.	Checked for compliance with IMO performance standards.	☒	☐	

15. NAVTEX equipment.

Make/model: FURUNO NX-700

a.	Checked for correct operation by monitoring incoming messages or inspecting recent hard copy.	☒	☐
b.	Performed test run of the self-test program, if provided.	☒	☐
c.	Checked for compliance with IMO performance standards.	☒	☐

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		YES	NO	N/A
16.	Enhanced Group Call. Make/model: FURUNO FELCOM 15			
a.	Checked for correct operation and area by monitoring incoming messages or by inspecting recent hard copy.	☒	☐	
b.	Performed test run of the self-test program, if provided.	☒	☐	☐
c.	Checked for compliance with IMO performance standards.	☒	☐	
17.	Float free satellite EPIRB. Make/model: ACR SAT2 406			
a.	Checked position and mounting for float free operation. Verified that EPIRB is installed in an easily accessible position and is ready to be manually released and capable of being carried by one person into a survival craft. Location: STRB. SIDE OUT SIDE PILOT HOUSE	☒	☐	
b.	Verified that the lanyard is firmly attached, in good condition, neatly stowed, and not tied to the vessel or the mounting bracket	☒	☐	
c.	Carried out visual inspection for defects.	☒	☐	
d.	Carried out the self-test routine.	☒	☐	
e.	Checked that the EPIRB ID and other information (include call sign of the ship) is clearly marked on the outside of the equipment.	☒	☐	
f.	Decoding the EPIRB identity number and other information confirming it is correct and the same as that marked on the EPIRB. Identity number: ADCDO23C3541001	☒	☐	
g.	Checked registration through documentation or through the point of contact associated with that country code.	☒	☐	
h	Checked battery expiry date: 9/2021			
i.	Checked hydrostatic release and its expire date: JUN-2021			
j.	Checked the emission in the 406 MHz band using the self-test mode or an appropriate device to avoid transmission of a distress call to satellites.	☒	☐	
k.	If possible, checked emission on the 121.5 MHz frequency using the self-test mode or an appropriate device to avoid activating the satellite system	☒	☐	☐
l.	Checked that the EPIRB has been maintained by an approved shore-based maintenance (SBM) provider at intervals required by the Administration (but not to exceed 5 years).[5] Date: FEB. 3, 2021 SBM Provider: SUPERIOR MARINE TECH.SERVICE	☒	☐	☐
m.	Checked that no transmission has been started after the test and remounting of the EPIRB in its bracket.	☒	☐	
n.	The presence of beacon operating instructions was verified.	☒	☐	
o.	Checked for compliance with IMO standards.	☒	☐	
18.	Type of secondary means of alerting: FURUNO FELCOM 15			

[5] The results of shore-based maintenance should be provided in the form of a shore-based maintenance report, a copy of which should be on board the vessel, and a label affixed to the exterior of the beacon detailing the name of the SBM provider and the date when the next shore-based maintenance is due. The SBM provider may affix a tamperproof seal or similar device on completion of the SBM. The maintenance interval, provided it does not exceed 5 years, may be aligned with the replacement date of the battery.

	YES	NO	N/A

19. Two-way VHF radiotelephone apparatus for survival craft.

	Make / Model	Battery Expiration Date
1	CSR-2726A	APR. 2022
2	CSR-2726A	APR. 2022
3	CSR-2726A	APR. 2022

a.	Checked for correct operation on Channel 16 and one other by testing with another fixed or portable VHF installation.	☒	☐	
b.	Checked the battery charging arrangements where rechargeable batteries are used	☒	☐	☐
c.	Checked that available channels are in compliance with requirements of flag administration.	☒	☐	☐
d.	Checked the battery expiry dates if primary cells are used to verify if valid.	☒	☐	☐
e.	Checked any fixed installation provided in a survival craft, where appropriate.	☒	☐	☐
f.	Checked they are clearly marked with ship's call sign (*permanently marked*).	☒	☐	
g.	Checked for compliance with IMO performance standards.	☒	☐	

20. Radar transponders (Now called "search and rescue locating devices" and may include AIS-SARTs, complying with the performance standards in MSC.246(83)).

	Make / Model:	Frequency band
1	ACR PATHFINDER 3	9 GHZ
2	ACR PATHFINDER 3	9 GHZ

a.	Checked for satisfactory functional test using on board 9 GHz radar, if possible.	☒	☐	☐
b.	Checked for satisfactory stowage.	☒	☐	
c.	Checked for operating instructions.	☒	☐	
d.	Checked for sufficient battery capacity for stand-by condition and to provide transmissions.	☒	☐	
e.	Checked for clear markings with ship's call sign.	☒	☐	
f.	Battery expiration date: 1) 1-Jul-21 2) 1-Jul-21			
g.	Checked for compliance with IMO performance standards.	☒	☐	

21.	Checked test equipment and spares carried to ensure carriage is adequate in accordance with the sea areas in which the ship trades and the declared options for maintaining availability of the functional requirements.	☒	☐	

22. Radar(s).

	Make / Model:
1	FURUNO FAR-2117
2	

a.	Checked for satisfactory functioning of equipment.	☒	☐	
b.	Checked capability to be operated individually and simultaneously, where two radars are required to be carried (for radars installed on or after 1 September 1984).	☒	☐	☐
c.	Checked radar(s) connected to emergency generator (for radars installed on or after 1 September 1984).	☒	☐	☐
d.[6]	Checked capability to operate on 9 GHz frequency.	☒	☐	☐
e.	Compliance with IMO performance standards.	☒	☐	

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[6] Per regulation V/12(g) and (h) of the GMDSS Amendments, for ships that are required to be fitted with radar installation(s), at least one radar installation shall be capable of operating in the 9 GHz frequency band from 1 February 1995.

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		YES	NO	N/A
23.	ARPA.			☐
	Make/model: FURUNO FAR-2117			
a.	Checked for satisfactory functioning of equipment.	☒	☐	
b.	Checked radar facilities operational (if ARPA integral part of radar).	☒	☐	☐
c.	Checked target acquisition, performance.	☒	☐	
	1. Manual.	☒	☐	
	2. Automatic.	☒	☐	
d.	Checked audible/visual operational warnings.	☒	☐	
24.	Equipment Approvals.			
a.	According to GMDSS all equipment needs to be type approved.	☒	☐	
b.	Checked for compliance with IMO performance standards.	☒	☐	
25.	Receiver for a Global Navigation Satellite system or a Terrestrial Radionavigation System (GPS)[7]			
a.	Make/model: FURUNO GP32			
b.	Information on the ship's position is continuously and automatically provided to all relevant GMDSS equipment.	☒	☐	
c.	The navigation receiver is supplied from a source of energy ensuring continuous supply of the ship's position information in the event of failure of the ship's main or emergency source of energy.	☒	☐	
d.	Checked for compliance with IMO performance standards.	☒	☐	

The following requirement(s) is/are considered part of the Safety Equipment, however it must be inspected by an ABS approved Radio Firm. If this equipment is not inspected at time of the Radio Survey, then an ABS approved Radio Firm is to be onboard at the time the Safety Equipment survey when an inspection of the below items is carried out:

26.	Automatic Identification System (AIS)			☐
a.	Checked for compliance with IMO performance standards, and for new installations, verified antenna layout, initial configuration report, interconnection diagrams, provision of the pilot plug and power supply arrangements.	☒	☐	
b.	Verified that the AIS power supply unit is type-approved or tested for electromagnetic compatibility according to IMO Res. A.813(19), if the AIS does not have an integrated power supply unit.	☒	☐	☐
c.	Verified that any interface installed between the AIS and other radio-navigational equipment is type-approved.	☒	☐	☐
d.	Verified that the AIS is connected to the emergency power source.	☒	☐	
e.	Checked that AIS is synchronized with UTC, and if provided, position information is correct and valid.	☒	☐	
f.	Verified that correct ship information has been entered into the AIS.	☒	☐	
g.	Performed test including radio frequency measurements and on-air test (to Vessel Traffic Service station or suitable test equipment.)	☒	☐	

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[7] A RDF is no longer required, as per 2000 SOLAS Amendments to Chapter V.

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27.	Electronic Chart Display and Information System (ECDIS)			☒
a.	Checked for compliance with IMO performance standards, and for new installations, verified initial testing report, interconnection diagrams, and power supply arrangements.	☐	☐	
b.	Carried out on-board tests of major functions either automatically or manually. In case of a failure, the test displayed information to indicate which module is at fault.	☐	☐	
c.	Provides a suitable alarm or indication of system malfunction.	☐	☐	
d.	Verified that appropriate back-up arrangements are provided.	☐	☐	
e.	The chart information used is the latest edition of information originated by a government-authorized hydrographic office, and conforms to IHO standards.	☐	☐	
f.	A record of updates has been updated, including time of application to the SENC.	☐	☐	

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Radio Technician's Remarks:

[redacted]
Radio Technician's Signature

[redacted]
Radio Technician's Printed Name

SUPERIOR MARINE TECH.SERVICE
Company

February 3, 2021
Date