

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 14 FEB 1958

Date of writing Report 8th Jan. 19 58 When handed in at Local Office 8th Jan. 19 58 Port of Vancouver, B.C.

No. in Survey held at Victoria, B.C. Date, First Survey 1st Nov. Last Survey 16th Dec. 1957

g. Book. (No. of Visits 8)

on the Twin Screw RCN Water Boat "YSW 220" Tons Gross 112 Net 76

Built at Victoria, B.C. By whom built Victoria Machinery Depot Yard No. 60 When built 12.57 Co. Ltd.

Owners Department of National Defence, Port belonging to Naval Ship, not registered Naval Service

Installation fitted by Victoria Machinery Depot Co. Ltd. When fitted 12.57

Is vessel equipped for carrying Petroleum in bulk No. Is vessel equipped with D.F. No. E.S.D. No. Gy.C. No. Sub.Sig. No. Radar No.

Plans, have they been submitted and approved Yes System of Distribution Parallel constant pressure 2 wire Voltage of Lighting 120

Heating 120 Power 120 D.C. or A.C., Lighting DC Power DC If A.C. state frequency -

Prime Movers, has the governing been found as per Rule when full load is thrown on and off Yes Are turbine emergency governors fitted with a trip switch - Generators, are they compound wound No, and level compounded under working conditions No - shunt

Are the generators arranged to run in parallel Yes Is the compound winding connected to the negative or positive pole -

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing - Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule RCN Supply Position of Generators Fore end engine room

port and starboard

is the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil Yes Switchboards, where are main switchboards placed Machinery Space, fore

end

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil Yes, what insulation is used for the panels Deadfront, if of synthetic insulating material is it an Approved Type - if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule - Is the construction as per Rule, including locking of screws and nuts. Yes Description of Main Switchgear

or each generator and arrangement of equaliser switches 2 pole automatic quench break (A.C.B.) circuit breaker with overload and reverse current trips for each generator and for shore connection

and the switch and fuse gear (or circuit breakers) for each outgoing circuit 2 pole A.C.B. circuit breaker for each outgoing circuit

are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 2

ammeters 2 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection - Earth Testing, state means provided -

earth indicating lamps Preference Tripping, state if provided - and tested -

switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes

make of fuses RCN type, are all fuses labelled Yes If circuit breakers are provided for the generators, at what

overload do they operate at 500 amps, and at what current do the reverse current protective

devices operate at 12-1/2 amps Cables, are they insulated and protected as per Rule Yes

otherwise than as per Rule are they of an Approved Type Yes, state maximum fall of pressure between bus bars and any point

under maximum load under 6% volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends -

are all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical

damage Yes, are any cables laid under machines or floorplates Yes, if so, are they adequately protected Yes State

type of cables (if in conduit this should also be stated) in machinery spaces HFR, galleys HFA

and laundries - State how the cables are supported or protected supported on Kuidorf hangers

with protection plate covers where necessary

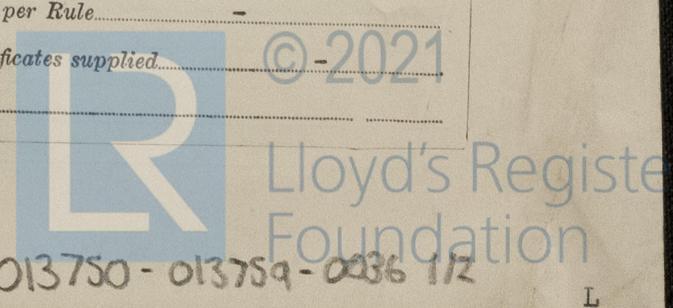
are all lead-sheaths, armouring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertight

bulkheads provided with deck tubes or watertight glands Yes, where unarmoured cables pass through beams, etc., are the holes

effectively bushed Yes Refrigerated chambers, are the cables and fittings as per Rule -

are refrigeration fan motors been constructed under survey - and test certificates supplied -

are the motors accessible for maintenance at all times -



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule... Yes Emergency Supply, state position... Yes

Navigation Lamps, are they separately wired... Yes controlled by separate double pole switches and fuses... Yes Are the switches and fuses... Yes Is an alternative supply provided... Yes Is an automatic indicator fitted... No Is an alternative supply provided... Yes for starting main engines... Yes Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule... Yes - state battery capacity... Panel 4002 ampère hours... - Where required to do so does it comply with 1948 International Convention... - Lighting, is fluorescent lighting fitted... No If so, state nominal lamp voltage... - and compartments where lamps are fitted... -

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof... Yes

Searchlights, No. of one, whether fixed or portable... fixed, are they of the carbon arc or of the filament type... filament

Heating and Cooking, is the general construction as per Rule... Yes, are the frames effectually earthed... Yes, are heaters in accommodation of the convection type... Yes Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil... Yes

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment... Hand pump Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing... None

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule... RCM S

Lightning Conductors, where required are they fitted as per Rule... -

Ships carrying Oil having a Flash Point of less than 150° F. Have all the special requirements of the Rules for such ships been complied with... - are all fuses of an Approved Cartridge Type... - make of fuse... - Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships... - Are all cables lead covered as per Rule... -

E.S.D., if fitted state maker... none location of transmitter and receiver... -

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations... Yes

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory... Yes

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT			PRIME MOVER.		
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	Boque Electric Co. of Canada, Montreal, P.Q.	15	120	125	1200	Diesel	R.H. Shephard Co. Inc. Hanover, Pa.
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS. CM		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	2	15	1	75780	125	155	35	DHFA	Alum.
EQUALISER									
All cables DHFA or MHFA US NAV. SHIPS SPEC. RATING 50°C									
Insulation Synthetic Resin, Felt Asbestos and Impervious Sheath with Aluminium wire braid armouring.									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
GENERATOR									

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	CM	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Engine Room Ltg. Panel 4001	1	30860	72	87	18	DHFA Alum.
General Ltg. Panel W.H. 4002	1	30860	35	87	36	" "
Navigation Ltg. Panel W.H. 4003	1	4497	8	20	42	" "
Engine Rm. Power Panel 4005	1	14340	74	55	45	" "
Navigation Alt. from Panel 4002	1	4497	8	20	10	" "
Shore Supply - 4006	1	38910	100	100	60	" "

DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.).

DESCRIPTION.	CONDUCTORS. CM		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Panel 4005 - Galley Cooker	1	9016 copy	32	41	34	DHFA	Alum.
Domestic FW Pump	1	2828 "	2	12	14	"	"
Immersion Htr. F.W.	1	2828	9	12	12	"	"
Space Heater	1	2828	8	12	30	"	"
Space Heater	1	2828	8	12	50	"	"
Battery Charging Bd.	1	4497	15	20	30	"	"
Panel 4002 - Wheelhouse Lighting	1	2828	1	12	30	"	"
Forecastle dk. low level	1	2828	2	12	60	"	"
Searchlight	1	2828	5	12	40	"	"
Horn	1	2828	1	12	30	"	"
Floodlights	1	4497	13	20	100	"	"
G.S. Outlets (Galley)	1	4497	12	20	40	"	"
Deck Lighting	1	2828	3	12	96	"	"
Forecastle deck	1	2828	3	12	75	"	"
Panel 4001 - Space Heaters	1	4497	17	20	100	"	"
Hold deck lighting	1	2828	6	12	160	"	"
G.S. Outlets	1	2828	6	12	190	"	"
Heaters, Winch & Windlass	1	2828	8	12	200	"	"
Resistor Comp. Vent Fan	1	2828	8	12	175	"	"
Panel 4003 - Masthead light F'mast	1	2828	1	9	180	"	"
Star Sidelight	1	2828	1	12	20	"	"
Port Sidelight	1	2828	1	12	20	"	"
Stern light	1	2828	1	12	80	"	"
Dangerous Cargo light	1	2828	1	9	210	"	"
N.U.C. lights	1	2828	1	9	140	"	"
Anchor light fwd.	1	2828	1	9	145	"	"
Chart table lights	1	2828	1	12	40	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS. CM	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
General Service Pump	1	5	14340 CM	37.6	55	70	DHFA Alum.
Anchor Windlass	1	5	14340	40.0	55	180	" "
General Service Winch	1	7.5	30860	58.0	87	185	" "
Eng. Rm. Vent. Fans	2	1.5	4497	12.5	20	75	" "
Water Cargo Pumps	2	7.5	22800	37.6	72	30	" "

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

The foregoing is a correct description.

VICTORIA MACHINERY DEPOT CO. LTD.
[Signature]
Per _____
GENERAL MANAGER

Electrical Contractors.

Date 8th January, 1958

COMPASSES.

Have the compasses been adjusted under working conditions. Yes

VICTORIA MACHINERY DEPOT CO. LTD.
[Signature]
Per _____
GENERAL MANAGER

Shipbuilders
Builder's Signature.

Date 8th January, 1958

Have the foregoing descriptions and schedules been verified and found correct. Yes

Is this installation a duplicate of a previous case Yes, in general If so, state name of vessel "YSF 216" & "YSF 217" & "YSF 218"

Plans. Are approved plans forwarded herewith. Yes If not, state date of approval Mtl. 31.5.56

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith. NO. RCM Supply

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.) Inspected by Department of National Defence, Inspection Services

The Electrical Equipment of this ship has been installed under Special Survey in accordance with the approved plans, Montreal letters and the Society's Rules. The materials and workmanship are good. The generator sets and motors (under 100 KW) were manufactured and tested under the jurisdiction of the Royal Canadian Navy. The installation has been examined under full working conditions, tested as per Rule and found satisfactory and in my opinion is eligible in conjunction with the machinery installation to be classed LMC 4,57. The installation was carried out under the inspection of the Royal Canadian Naval Overseers also. Forwarded herewith:- Yarrows Ltd. as fitted Drawings.

YSW E 2A Schematic Wiring Diagram.

" E 5A Arrangement of Lighting System all decks.

" E 6A Arrangement of Power System all decks.

" E 7A Elementary & Isometric Wiring Diagram of Navigation Lights.

" E 9 List of Feeders and Mains Lighting System.

Total Capacity of Generators 30 Kilowatts.

The amount of Fee ... \$60.00 : When applied for, 16.12.1957

Travelling Expenses (if any) \$20.00 : When received, 19

[Signature]

ROBERT RENNIE
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUESDAY 22 APR 1958

Assigned See Rpt. 1.

2m. 456-Transfer. (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee Minutes.)

x/x ar
17.1.58



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