

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

31 OCT 1955

Date of writing Report SEPT 2ND 1955 When handed in at Local Office SEP 12 1955 Port of MONTREAL

No. in Survey held at KINGSTON Date, First Survey APRIL 25TH Last Survey JUNE 14TH 1955
Reg. Book. (No. of Visits 8)

on the M.V. "AMHERST ISLANDER" Tons { Gross 183.75
Net 114.21
Built at KINGSTON By whom built KINGSTON SHIPYARDS LTD Yard No. 48 When built 1955

Owners DEPARTMENT OF HIGHWAYS, TORONTO Port belonging to KINGSTON

Installation fitted by KINGSTON When fitted 1955-6

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 TWO WIRE Voltage of Lighting 110

Heating 110 Power 110 D.C. or A.C., Lighting A.C. Power A.C. If A.C. state frequency 60 CYCLES

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 -, and level compounded under working conditions -

Are the generators arranged to run in parallel - 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 NONE Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule NO Position of Generators ENGINE ROOM PORT SIDE

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 ENGINE ROOM PORT SIDE

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 METAL CLAD - DEAD FRONT, 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 for each generator and arrangement of equaliser switches DOUBLE POLE SINGLE THROW SWITCH, EACH POLE FUSED

and the switch and fuse gear (or circuit breakers) for each outgoing circuit DOUBLE POLE SINGLE THROW SWITCHES, EACH POLE FUSED

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard ONE ammeters ONE voltmeters NONE 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 TWIN LAMPS Preference Tripping, state if provided No, and tested -

Switches, Circuit Breakers and Fuses, are they as per Rule YES & A.I.E.E. 45, are the fuses an Approved Type YES A.I.E.E. 45 make of fuses AS APPROVED, are all fuses labelled YES If circuit breakers are provided for the generators, at what overload do they operate -, and at what current do the reverse current protective devices operate - Cables, are they insulated and protected as per Rule YES & A.I.E.E.

if otherwise than as per Rule are they of an Approved Type A.I.E.E. 45, state maximum fall of pressure between bus bars and any point under maximum load 2.0 volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends YES

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 GEN², if so, are they adequately protected YES State type of cables (if in conduit this should also be stated) in machinery spaces V.I.R LEAD COVERED, galleys - and laundries - State how the cables are supported or protected HANGERS AND CABLE TRAYS CLIPPED, GUARDED 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 -

Have 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

NONE

Navigation Lamps, are they separately wired YES controlled by separate double pole switches and fuses YES Are the switches and fuses in a position accessible only to the officers on watch YES, is an automatic indicator fitted YES Is an alternative supply provided YES

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule NONE, state battery capacity in ampere hours - Where required to do so does it comply with 1948 International Convention -

Lighting, is fluorescent lighting fitted YES If so, state nominal lamp voltage 110 and compartments where lamps are fitted

WHEELHOUSE, CAPTAIN'S & ENGINEERS ROOMS, DECKHANDS ROOM & PURSER'S OFFICE

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weather proof 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 -, are the frames effectually earthed -, are heaters in the accommodation of the convection type - 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 YES 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 YES

Lightning Conductors, where required are they fitted as per Rule NONE

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 LIMITED SERVICE

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				TYPE.	PRIME MOVER.
			Kw. per Generator.	Volts.	Amps.	Revs. per Min.		MAKER.
MAIN ...	ONE	WRIGHT ELECTRIC MOTORS (HX) LTD. HALIFAX, ENGLAND	10	110	114	1200	DIESEL	CROSSLEY BROS.
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		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 ...	ONE	10	ONE	168 MCM.	114	273	30	V.C.	L.C. & STEEL ARMOUR
" " EQUALISER ...									
SHORE SUPPLY			ONE	60 MCM.	-	152	75	V.C.	L.C. & STEEL ARMOUR
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER: MOTOR ...									
" " GENERATOR...									

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

DESCRIPTION.	No. of	Kw.	CONDUCTORS.	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.	
NAVIGATION LIGHTS PANEL	ONE		ONE	4110 CM	2.6	15	80 V.I.R. L.C. & STEEL ARMOUR
FLOOD LIGHTS PANEL	ONE		ONE	6530 CM	13.4	32	75 V.C. " " " "
DECK LIGHTING PANEL	ONE		ONE	41700 CM	54.3	114	30 V.C. " " " "
ENGINE ROOM LIGHTING PANEL	ONE		ONE	10400 CM	14.8	49	30 V.C. " " " "
ENGINE ROOM POWER PANEL	ONE		ONE	41700 CM	52.0	114	50 V.C. " " " "

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
NAVIGATION LIGHTS CIRCUITS	ONE	4110 CM	-	15	400	V.I.R.	L.C. & STEEL ARMOUR
FLOOD LIGHTS	ONE	4110 CM	2.2 MAX	15	250	V.I.R.	" " " "
SEARCHLIGHT	ONE	6530 CM	15	32	80	V.C.	" " " "
DECK LIGHTING PANEL BRANCH							
CIRCUITS - LIGHTING ACCOMMOD ^N	ONE	4110 CM	4.2	15	2500	V.I.R.	" "
DITTO - FANS & DOM. FRIG.	ONE	4110 CM	16	15	1000	V.I.R.	" "
DITTO - HOT PLATE	ONE	10400 CM	20	49	50	V.C.	" " " "
DITTO - LIGHTING DECK	ONE	4110 CM	2.62	15	1000	V.I.R.	" " " "
ENGINE ROOM LIGHTING BRANCH							
CIRCUITS (6)	ONE	4110 CM	2.78	15	1300	V.I.R.	" " " "
HORN	ONE	6530 CM	0.65	32	80	V.C.	" " " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	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.	
STEERING GEAR	ONE	2	ONE	41700 CM	24	114	120 V.C. L.C. & STEEL ARMOUR
F.W. AND SANITARY PUMP	ONE	2	ONE	10400 CM	25	49	30 V.C. L.C. & STEEL ARMOUR
L.O. PURIFIER	ONE	3/4	ONE	6530 CM	12	32	15 V.C. " " " "
E.R. HEATER FANS	TWO	1/30	ONE	4110 CM	2.4	15	45 V.I.R. " " " "
E.R. VENT. FAN.	ONE	3/4	ONE	6530 CM	12	32	70 V.C. " " " "
ACCOMMOD ^N VENT FAN.	ONE	1/3	ONE	6530 CM	5.4	32	70 V.C. " " " "
BOILER CIRCUL ^S PUMP	ONE	1/6	ONE	4110 CM	2.8	15	30 V.I.R. " " " "
BOILER FAN	ONE	1/8	ONE	4110 CM	2.4	15	30 V.I.R. " " " "

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.

Electrical Contractors. _____ Date _____

COMPASSES.

Have the compasses been adjusted under working conditions YES

[Handwritten Signature]

Builder's Signature. _____ Date _____

Have the foregoing descriptions and schedules been verified and found correct YES

Is this installation a duplicate of a previous case NO If so, state name of vessel _____

Plans. Are approved plans forwarded herewith YES If not, state date of approval _____

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith YES STEERING GEAR

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.) THE ELECTRICAL EQUIPMENT OF THIS VESSEL HAS BEEN INSTALLED UNDER SPECIAL SURVEY IN ACCORDANCE WITH THE APPROVED PLANS, THE REQUIREMENTS OF THE RULES AND THE A.I.E.E. No 45 SPECIFICATIONS.

THE MATERIALS AND WORKMANSHIP ARE GOOD ON COMPLETION THE EQUIPMENT WAS TRIED UNDER WORKING CONDITIONS AND FOUND SATISFACTORY

THE EQUIPMENT IS, IN MY OPINION, SUITABLE FOR A CLASSED VESSEL

Total Capacity of Generators 10 Kilowatts.

The amount of Fee ... 4 138⁰⁰ : OCT 20 1955

Travelling Expenses (if any) 50⁰⁰ : _____

W. Heacie
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUESDAY 20 DEC 1955

Assigned See Rpt. 4/5

Im. 7, 14. - Transfer. (MADE AND PRINTED IN ENGLAND)
 (The Surveyors are requested not to write on or below the space for Committee Minute.)

gr.
 3/11/55



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