

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 19 MAR 1942

Date of writing Report 19-2-42 When handed in at Local Office 12 MAR 1942 Port of HULL

No. in Survey held at 9/11. Date, First Survey 15. 1. 42. Last Survey 1. 3. 19 42. (Number of Visits 15)

on the H.M. "Reserve" Tug ADEPT. Tons { Gross 601.40 Net 3.21

Built at Selby By whom built Cochran & Sons Yard No. 1237 When built 1942.2

Owners The Admiralty Port belonging to

Electrical Installation fitted by A. M. Gready & Son Ltd. Contract No. When fitted 1942.2

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

Have plans been submitted and approved Yes System of Distribution Parallel. Conductor pressure 200V Voltage of supply for Lighting 110

Heating 110 Power 110 Direct or Alternating Current, Lighting 110 Power 110 If Alternating Current state frequency Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off Yes Are turbine emergency governors fitted with a

trip switch as per Rule Generators, are they compound wound Yes, are they level compounded under working conditions Yes,

if not compound wound state distance between generators and from switchboard Where more than one generator is fitted are they

arranged to run in parallel No, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole

Positive Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing Have certificates of

test for machines under 100 kw. been supplied Admiralty Supply and the results found as per rule Are the lubricating arrangements and the construction

of the generators as per rule Yes Position of Generators Engine room. Starboard side -

is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situated

near unprotected combustible material state distance from same horizontally and vertically, are the generators protected from mechanical

injury and damage from water, steam and oil Yes, are the bedplates and frames earthed Yes and the prime movers and generators in metallic

contact Yes Switchboards, where are main switchboards placed Engine room. Adjacent to Generators

are they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam

and oil Yes, if situated near unprotected combustible material state distance from same horizontally and vertically, what insulation

material is used for the panels Smdanyo, if of synthetic insulating material is it an Approved Type Yes, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule Is the frame effectually earthed Yes.

Is the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fuses

to pilot and earth lamps, voltmeters, etc. Yes locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead"

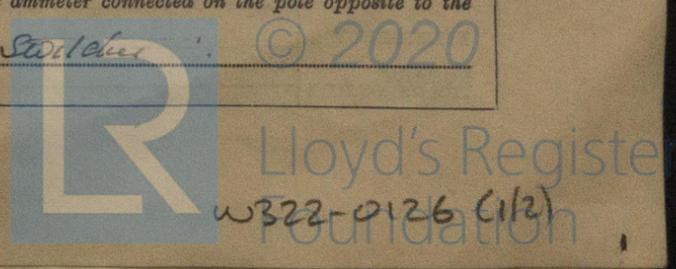
side of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches

DP. switches & fuses to each Generator with DP. throw over Selector in Series Switch, connecting board to either Generals or Shore connection.

and for each outgoing circuit DP switches & fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Instruments on main switchboard One

ammeters One voltmeters synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the equaliser connection Earth Testing, state means provided Earth lamps & switches



Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled as per Rule Yes, are the reversed current protection devices connected on the pole opposite to the equaliser connection ✓, have they been tested under working conditions ✓. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes. Cables, are they insulated and protected as per the appropriate Tables of the Rules Yes, if otherwise than as per Rule are they of an approved type ✓, state maximum fall of pressure between bus bars and any point under maximum load 4 volts, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends ✓ with insulating compound ✓ or waterproof insulating tape ✓. 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 cables laid under machines or floorplates Yes, if so, are they adequately protected ✓. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit ✓. State how the cables are supported and protected Clipped to trap or bulkheads.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes. Refrigerated chambers, are the cables and fittings as per Rule ✓. 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 effectually bushed Yes and with what material Lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. Emergency Supply, state position None and method of control ✓.

Navigation Lamps, are they separately wired Yes, controlled by separate double pole switches Yes 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. Secondary Batteries, are they constructed and fitted as per Rule Yes, are they adequately ventilated Yes. Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present Yes, if so, how are they protected Yes.

and where are the controlling switches fitted ✓, are all fittings suitably ventilated Yes. are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of One, whether fixed or portable portable, are their fittings as per Rule Yes. Heating Immersion, is the general construction as per Rule Yes. are the frames effectually earthed Yes, are heaters in the accommodation of the convection type ✓. Motors, are all motors constructed and installed as per Rule Yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil Yes, if situated near unprotected combustible material state minimum distance from same horizontally ✓ and vertically ✓.

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing ✓. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule Supply. Control Gear and Resistances, are they constructed and fitted as per Rule Yes. Lightning Conductors, where required are they fitted as per Rule Yes. Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with ✓, are all fuses of the cartridge type ✓. are they of an approved type ✓. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type ✓. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule Yes, are they suitably stored in dry situations Yes. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory Yes.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	<u>One</u>	<u>15</u>	<u>110</u>	<u>136</u>	<u>500</u>	<u>Steam Engine</u>	<u>✓</u>	<u>✓</u>
HARBOUR	<u>One</u>	<u>7 1/2</u>	<u>"</u>	<u>68</u>	<u>"</u>	<u>do</u>	<u>✓</u>	<u>✓</u>
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX LENGTH (lead plus return feet).	INSULA-TED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	<u>15</u>	<u>One</u>	<u>37/072</u>	<u>136</u>	<u>152</u>	<u>40</u>	<u>V.I.R</u>	<u>LC AP 6187A.</u>
" " "	<u>7 1/2</u>	<u>"</u>	<u>19/064</u>	<u>68.</u>	<u>83</u>	<u>24</u>	<u>"</u>	<u>" " 6189A.</u>
SHORE CONNECTION	<u>15</u>	<u>"</u>	<u>37/072</u>	<u>136</u>	<u>152</u>	<u>30</u>	<u>"</u>	<u>" " 6187A</u>
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS ...	No.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX LENGTH (lead plus return feet).	INSULA-TED WITH.	HOW PROTECTED.
D.G.	<u>One</u>	<u>19/064</u>	<u>37</u>	<u>83</u>	<u>52</u>	<u>V.I.R</u>	<u>L.C AP 6189A.</u>
For'd lighting	<u>"</u>	<u>7/064</u>	<u>44</u>	<u>46</u>	<u>280</u>	<u>"</u>	<u>" " 6191A</u>
Wheel House lighting	<u>"</u>	<u>7/036</u>	<u>6</u>	<u>24</u>	<u>275</u>	<u>"</u>	<u>" " 6193A</u>
Navigation	<u>"</u>	<u>"</u>	<u>9</u>	<u>"</u>	<u>275</u>	<u>"</u>	<u>" " "</u>
Ventilation	<u>"</u>	<u>"</u>	<u>22</u>	<u>"</u>	<u>240</u>	<u>"</u>	<u>" " "</u>
10° Signalling Projector	<u>"</u>	<u>"</u>	<u>19</u>	<u>"</u>	<u>290</u>	<u>"</u>	<u>" " "</u>

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS ... (direct from board)	No.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX LENGTH (lead plus return feet).	INSULA-TED WITH.	HOW PROTECTED.
NAVIGATION LIGHTS	<u>One</u>	<u>7/044</u>	<u>—</u>	<u>31</u>	<u>225</u>	<u>V.I.R</u>	<u>L.C AP 6192A</u>
LIGHTING AND HEATING { followed by ...	<u>"</u>	<u>1/044</u>	<u>115</u>	<u>5</u>	<u>max</u>	<u>"</u>	<u>L.C AP 6196A</u>
	<u>"</u>	<u>7/0076</u>	<u>max</u>	<u>10</u>	<u>160</u>	<u>"</u>	<u>T.R. Station AP 7988A</u>
Immersion Heats for Oil fired Galley	<u>"</u>	<u>3/036</u>	<u>5</u>	<u>10</u>	<u>45</u>	<u>"</u>	<u>AP 6195A</u>
Sub circuits lighting	<u>"</u>	<u>1/044</u>	<u>3</u>	<u>5</u>	<u>max 60</u>	<u>"</u>	<u>AP 6196A</u>

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX LENGTH (lead plus return feet).	INSULA-TED WITH.	HOW PROTECTED.	
Ventilating Fans 10"	<u>2</u>	<u>One</u>	<u>One</u>	<u>7/029</u>	<u>11</u>	<u>15</u>	<u>max 60</u>	<u>V.I.R.</u>	<u>L.C AP 6194A.</u>
do 5"	<u>2</u>	<u>1/4</u>	<u>"</u>	<u>1/044</u>	<u>2.5</u>	<u>5</u>	<u>max 100</u>	<u>"</u>	<u>AP 6196A.</u>
Refrigerator	<u>1</u>	<u>3/4</u>	<u>"</u>	<u>1/044</u>	<u>—</u>	<u>5</u>	<u>30</u>	<u>"</u>	<u>"</u>

Note. Wiring for Domestic type Refrigerator as per Admiralty plans. The 3/4 HP motor is stated to be in excess of the power required.

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.

WM BROADY & SON LTD.
 ENGLAND STREET,
 HULL.

Electrical Engineers.

Date 12. 2. 42

COMPASSES.

Minimum distance between electric generators or motors and standard compass.....
 Minimum distance between electric generators or motors and steering compass.....
 The nearest cables to the compasses are as follows:-
 A cable carrying Ampères feet from standard compass feet from steering compass.
 A cable carrying Ampères feet from standard compass feet from steering compass.
 A cable carrying Ampères feet from standard compass feet from steering compass.
 Have the compasses been adjusted with and without the electrical installation at work at full power.....
 Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted.....
 The maximum deviation due to electric currents has found to be degrees on course in the case of the
 standard compass, and degrees on course in the case of the steering compass.

At present no cables in vicinity of compasses for testing. Corrected 20/3/42

Builder's Signature.

Date.....

Is this installation a duplicate of a previous case.....

Yes.

If so, state name of vessel

"ASSURANCE" but with numerous modifications including power of installation -

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

This installation has been fitted on board in accordance with the approved Admiralty plans & requirements & the Society's Rules. The workmanship & materials are good & when tried under working conditions & tests as required by the Admiralty & the Rules the installation was found satisfactory in every respect.

*Noted
 20/3/42*

Total Capacity of Generators..... *22 1/2* Kilowatts.

The amount of Fee £ *50 : 0* :
 Travelling Expenses (if any) £ : :
 When applied for, **13. MAR. 1942**
 When received,19.....

[Signature]
 Surveyor to Lloyd's Register of Shipping.

TUE 24 MAR 1942

Committee's Minute

Assigned

See Hull No. 51541

2m.10.33.—Transfer. (MADE IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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