

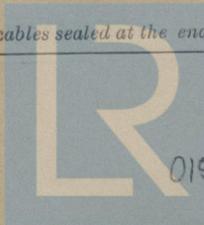
REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 17 AUG 1946

Date of writing Report.....19..... When handed in at Local Office.....19..... Port of.....HULL.....
 No. in Survey held at.....Hull..... Date, First Survey.....26.9.45..... Last Survey.....5.7.1946.....
 Reg. Book..... (Number of Visits.....1.0.....)
 on the "NEREIDIA" A/MS 1194 Tons {Gross.....275
 Net.....-
 Built at.....Selby..... By whom built.....Cochrane & Son Ltd. Yard No.....1307 When built.....1946
 Owners.....Ministry of War Transport Port belonging to.....-
 Electrical Installation fitted by.....Wm. Broady & Son Ltd. Contract No.....- When fitted.....1946
 Is vessel fitted for carrying Petroleum in bulk.....No Is vessel equipped with D.F.....No E.S.D.....No Gy.C.....No Sub.Sig.....No

Have plans been submitted and approved.....Yes System of Distribution.....two wire Voltage of supply for Lighting.....110
 Heating.....- Power.....110 Direct or Alternating Current, Lighting.....D.C. Power.....D.C. If Alternating Current state periodicity.....- Prime Movers,
 has the governing been tested and found as per Rule when full 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.....-
 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.....- are shunt field regulators provided.....Yes Is the compound winding connected to the negative or positive pole
 negative 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.....Yes and the results found as per rule.....Yes Are the lubricating arrangements and the construction
 of the generators as per rule.....Yes Position of Generators.....Engine room starboard side on platform
 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 starboard side near generator
 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....."Syndanyo" 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.....Double pole quick
 break knife switches and double pole fuses.
 and for each outgoing circuit.....Double pole quick break knife switches and double pole fuses.
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule.....Yes 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.....Lamps coupled to earth via switches and fuses.
 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 If circuit breakers are provided for the generators, at what overload current did they open when tested.....- are the reversed current
 protection devices connected on the pole opposite to the equaliser connection.....- have they been tested under working conditions, and at what current
 did they operate.....Yes 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.....3V 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 ends.....- © 2021



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 No, 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 In machinery spaces etc. L.C. clipped to perforated steel trays or direct to steelwork, in accommodation etc. L.C. clipped to wooden battens or direct to woodwork.

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 - Emergency Supply, state position - 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 No. Secondary Batteries, are they constructed and fitted as per Rule - are they adequately ventilated - what is the battery capacity in ampere hours -

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 No, if so, how are they protected -

and where are the controlling switches fitted - are all fittings suitably ventilated -

are all fittings and accessories constructed and installed as per Rule - Searchlight Lamps, No. of - whether fixed or portable - are their fittings as per Rule - 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 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 - Are

motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment - 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 - Control Gear and Resistances, are they constructed and fitted as per Rule Yes. Lightning Conductors, where required are they fitted as per Rule steel masts. 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 - Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships - Are the cables lead covered as per Rule +. 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 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	1	6	110	54.5	500	Steam engine		
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED 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 ...	6	1	19/.052	54.5	54	24	V.I.R.	L.C.
" " EQUALISER ...					64			
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR ...								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED 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.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...			Max.				
D.G.	1	7/.064	22.5	46	20'	V.I.R.	L.C.

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS ...	1	7/.036	5	24	100'	V.I.R.	L.C. & A.
NAVIGATION LIGHTS ...	1	7/.036	3	15	100'	"	" "
LIGHTING AND HEATING ...							
Accommodation	1	7/.036	10	24	140'	"	" "
Engine & boiler room direct from main switchboard							

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED 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.			
Refrigerator	1	1	1	3/.029	4	5	70'	V.I.R.	L.C.
Vent Fan 5"	1	1	1	3/.036	5	10	60'	"	"

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.

W.M. BROADY & SONS LTD.

10, QUEEN STREET,
HULL

Electrical Engineers.

Date 15.6.46.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 61'

Minimum distance between electric generators or motors and steering compass 56'

The nearest cables to the compasses are as follows:—

A cable carrying .05 Ampères inside 5 feet from standard compass 5 feet from steering compass.

A cable carrying .05 Ampères 5 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 electric installation at work at full power Yes

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted Yes

The maximum deviation due to electric currents was found to be Nil degrees on every course in the case of the standard compass, and Nil degrees on every course in the case of the steering compass.

FOR COCHRANE & SONS, LTD.

Builder's Signature.

Date

V. Gray

DIRECTOR

Is this installation a duplicate of a previous case Yes If so, state name of vessel "EMPIRE BARBARA".

Plans. Are approved plans forwarded herewith No If not, state date of approval 5.4.42.

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith Admiralty Supply

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

The Electrical Equipment of this vessel was installed under special survey and in accordance with the specification, The materials used are of good quality and the workmanship is good. On completion the equipment was operated under working conditions with satisfactory results and the insulation resistance of all circuits and apparatus was measured & found good.

This equipment is in my opinion suitable for a classed vessel.

Noted
L.F.
2/9/46

Total Capacity of Generators 6 Kilowatts.

The amount of Fee ... £ 3 : 15 :
25% Specification
Travelling Expenses (if any) £ : :
When applied for 14 AUG 1946
When received.

A. G. Connell

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 8 SEP 1946

Assigned For Minute see J.E. Welch, R.M.



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5m. 4.28.—Transfer. (MADE AND PRINTED IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)