13.

No. 5787.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 31 OCT 1942

writing Report 20th OCT 1942. When handed in at Local Office ..... 19..... Port of DUBLIN.

n Survey held at Dublin Date, First Survey 25th SEPT Last Survey 20TH OCT 1942
g. Book. (Number of Visits 6.)

on the T.S.S. "LADY CONNAUGHT" Tons Gross. 2284 (New Tonnage) (1685 58/100)
Net. 962 (657 69/100)

t at BELFAST By whom built HARLAND & WOLFF LTD. Yard No. When built 1912-3

ers BRITISH & IRISH STM. PACKET CO. LD. Port belonging to LIVERPOOL

rical Installation fitted by LIFFEY DOCKYARD LTD. Contract No. When fitted 1942

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

plans been submitted and approved ..... System of Distribution TWO WIRE Voltage of supply for Lighting 110

ng NONE Power 110 Direct or Alternating Current, Lighting D.C. Power D.C. If Alternating Current state periodicity ✓ Prime Movers,

e governing been tested and found as per Rule when full load is suddenly thrown on and off ..... Are turbine emergency governors fitted with a

witch as per Rule ✓ Generators, are they compound wound Yes, are they level compounded under working conditions Yes,

compound wound state distance between generators ✓ and from switchboard ✓. Where more than one generator is fitted are they

ged to run in parallel Yes, are shunt field regulators provided Yes. Is the compound winding connected to the negative or positive pole

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

r machines under 100 kw. been supplied ✓ and the results found as per rule ✓. Are the lubricating arrangements and the construction

generators as per rule Yes. Position of Generators FITTED SIDE BY SIDE IN TUNNEL RECESS CLOSE TO MAIN SWITCH

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

nprotected combustible material state distance from same horizontally ✓ and vertically ✓, are the generators protected from mechanical

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

Yes. Switchboards, where are main switchboards placed FASTENED ON TUNNEL RECESS BULKHEAD

.....

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

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

l is used for the panels SLATE INSULATED BY MICA BUSHES, if of synthetic insulating material is it an Approved Type ✓, if of

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

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

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

switches Yes. Description of Main Switchgear for each generator and arrangement of equaliser switches TWO TRIPLE POLE CIRCUIT

TERS WITH OVERLOAD TRIPS AND REVERSE CURRENT RELEASES TIME LAGS AND MAGNETIC BLOW OUTS.

OLE FOR WORKING ON EQUALIZING CIRCUITS.

each outgoing circuit SINGLE POLE MAIN SWITCHES.

.....

partments containing switchboards composed of fire-resisting material or lined as per Rule Yes. Instruments on main switchboard Yes

s Two voltmeters Two synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

connection Yes. Earth Testing, state means provided EARTH LAMPS WITH SWITCHES.

s, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled as

Yes. If circuit breakers are provided for the generators, at what overload current did they open when tested ....., are the reversed current

n devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions, and at what current

operate ..... Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes

re 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 ✓,

imum fall of pressure between bus bars and any point under maximum load ....., are the ends of all cables having a sectional area of 0·04

h and above provided with soldering sockets Yes. Are paper insulated and varnished cambric insulated cables sealed at the ends None

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 or run in conduit ✓. State how the cables are supported and protected BY CLIPS TO DECKS AND 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 effectively 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 SINGLE POLE and fuses DOUBLE POLE. 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 ampère 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 ENTRANCE TO ENGINE ROOM, are all fittings suitably ventilated Yes, are all fittings and accessories constructed and installed as per Rule Yes. **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 and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil, 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. **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 ✓, are they suitably stored in dry situations ✓. **Insulation Tests**, has the insulation resistance of all circuits and apparatus been tested and found satisfactory ✓.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT Kilowatts.	Volts.	Amperes.	Revs. per Min.	DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE. Fuel Used.	Flash Point of Fuel.
MAIN	TWO	30 EACH	110	272	600	VERTICAL SINGLE CYLINDER STEAM ENGINE	-	-
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS. No. in Parallel Per Pole.	CONDUCTORS. Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES. In the Circuit.	MAXIMUM CURRENT IN AMPERES. Rule.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
MAIN GENERATOR	60	2	61/.93	272		30 FT.	V.I.R.	ARMOURED & BRAIDED
" " EQUALISER			61/.93			15 FT.	V.I.R.	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS. No. in Parallel Per Pole.	CONDUCTORS. Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES. In the Circuit.	MAXIMUM CURRENT IN AMPERES. Rule.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
AUX. SWITCHBOARDS AND SECTION BOARDS							
No.1 AND No.2 FUSEBOARDS CATTLE LIGHTING	1	7/036	22		100	VIR	ARMOURED & BRAIDED.
No. 3 AND 4 FUSEBOARDS CATTLE VENTILATING FANS	1	19/052	46		90	"	"
No. 5 DISTRIBUTION BOARD ACCOMMODATION.	1	19/052	28		78	"	"
No. 6 DUP. DIST. BOARD ENGINE ROOM & STOKEHOLD	1	19/052	30		78	"	"
No. 7. FUSE BOARD ACCOMMODATION AFT.	1	7/036	18		264	"	"
No 8. " " MIDSHIP	1	7/036	10		180	"	"
No 9. " CAPTAINS QUARTERS.	1	7/026	5		30	"	LEAD COVERED.
No. 10. " NAVIGATION	1	3/029	4·75		260	"	ARMOURED & BRAIDED.

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS		7/036	20		240		ARMOURED & BRAIDED.
NAVIGATION LIGHTS		3/029	2		460		"
LIGHTING AND HEATING							

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							

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.

LIFFEY DOCKYARD LTD.

MANAGING DIRECTOR

Electrical Engineers. *Date* 21st OCTOBER 1942

COMPASSES.

Minimum distance between electric generators or motors and standard compass NOT IN CLOSE PROXIMITY

Minimum distance between electric generators or motors and steering compass do. do. do.

The nearest cables to the compasses are as follows:—

A cable carrying 14 *Ampères* 1.25 *feet from standard compass* 7 *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 electric 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 was found to be ..... *degrees on* ..... *course in the case of the standard compass, and* ..... *degrees on* ..... *course in the case of the steering compass.*

..... *Builder's Signature.* *Date* .....

Is this installation a duplicate of a previous case ✓ *If so, state name of vessel* ✓

Plans. *Are approved plans forwarded herewith* ✓ *If not, state date of approval* ✓

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

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

The electrical equipment of this vessel has been removed and fitted on board under Special Survey.
The material + workmanship is good.
To complete the survey the two triple pole circuit-breakers to be fitted Engineroom wiring to be completed. Voltmeters to be fitted with scales to Rule. The equipment on completion of survey to be tested under full working conditions.

A temporary main switch has been fitted for use during the voyage from Dublin to Belfast. The plant has been tested under working conditions as far as practicable and found satisfactory.

Total Capacity of Generators 60 *Kilowatts.*

The amount of Fee	£ 28 : 10 :	When applied for, ... 19.....	
Travelling Expenses (if any)	£ : :	When received. ..... 19.....	

R. B. Lyon.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 20 NOV 1942

Assigned See Lon / Lr to Dub — See Ther / Dub. Rpt. 5787

5m.4.39.—Transfer. (MADE AND PRINTED IN ENGLAND.)

(The Surveyors are requested not to write on or below the space for Committee's Minute.)