

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report

19

When handed in at Local Office

20-5

1924 Port of

Belfast

Received at London

MON. JUN. 2 1924

No. in Survey held at

Belfast

Date, First Survey

March 19th

Last Survey

May 22nd

1924

Reg. Book.

on the New Steel Y.M.S. Glenshiel

(Number of Visits.....7.....)

Tons

Gross 9414

Net 5803

When built 1924

Built at

Belfast

By whom built

Harland & Wolff Ltd

Yard No. 594

Owners

Glen Line Ltd

Port belonging to

Belfast.

Electric Light Installation fitted by

Harland & Wolff Ltd

Contract No. 594

When fitted 1924.

System of Distribution

Double wire

Pressure of supply for Lighting

220

volts, Heating

220

volts, Power

220

volts.

Direct or Alternating Current, Lighting

Direct

Power

Direct

If alternating current system, state frequency of periods per second

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off

Yes.

Generators, do they comply with the requirements regarding overload

Yes.

, are they compound wound

Yes.

are they over compounded 5 per cent.

Yes.

, if not compound wound state distance between each generator.

Where more than one generator is fitted are they arranged to run in parallel

Yes.

, is an adjustable regulating resistance fitted in

series with each shunt field

Yes.

Are all terminals accessible and clearly marked

Yes.

, are they so spaced or shielded that they cannot be accidentally earthed,

or short circuited

Yes.

Are the lubricating arrangements of the generators as per Rule

Yes.

Position of Generators

Port side of Motor Room

is the ventilation in way of the generators satisfactory

Yes.

, are they clear of all inflammable material

Yes.

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

and

, are the generators protected from mechanical injury and damage from water, steam or oil

Yes.

are their axis of rotation fore and aft

Yes.

Earthing, are the bedplates and frames of the generating plant efficiently earthed

Yes.

are the prime movers and

their respective generators in metallic contact

Yes.

Main Switch Boards, where placed

on Platform above thrust races in Motor Room

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard

✓

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes

Yes.

are they protected from mechanical injury and damage from water, steam or oil

Yes.

, if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards

and

are they constructed wholly of durable, incombustible non-absorbent materials

Yes.

, is all insulation of high dielectric strength and of

permanently high insulation resistance

Yes.

, if semi-insulating material is used, are all conducting parts connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework

Yes.

, and is the

frame effectively earthed

Yes.

Are the following fittings as per Rule, viz. :— spacing or shielding of live parts

Yes.

, accessibility of all parts

Yes.

, absence of fuses on back of board

Yes.

, proportion of omnibus

bars

Yes.

, individual fuses to voltmeter, pilot or earth lamp

Yes.

, connections of switches

Yes.

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

The switchgear consists of each generator a 1000 amp D.P. switch (equalizer blade closing before opening after Main blade) and a 1000 amp D.P. circuit breaker. Maximum Reverse current with time lag. The outgoing circuits have each a D.P. switch & one fuse per pole.

Instruments on main switchboard

2

ammeters

2

voltmeters

arranged synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

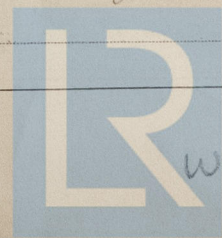
earth lamps

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules

Yes.

Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule

Yes.



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Insulation of Cables, state type of cables, single or twin single are the cables insulated and protected as per Tables III or IV of the Rules. Yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 8 volts

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 square inch and above provided with soldering sockets

Paper Insulated Cables. *If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound* ✓

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage. Yes

Support and Protection of Cables, state how the cables are supported and protected. *Cables clipped to perforated steel plating protected by lead covering or lead covering, sewed, steel armoured & braided overall.*

If cables are run in wood casings, are the casings and caps secured by screws ☒ , are the cap screws of brass ☒ , are the cables run in separate grooves ☒ . If armored and lead covered cables are secured by metal clips, are the clips ☐ , are the cables run in

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements *yes*

Joints in Cables, state if any, and how made, insulated, and protected none

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands

Bushes in Beams and Non-watertight Positions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed Yes state the material of which the bushes are made Lead

Earthling Connections, state what earthing connections are fitted and their respective sectional areas All electric light fittings, sockets etc. fixed other than to steelwork of the ship are provided with earthing connection equivalents to working conductors, are their connections made as per Rule Yes.

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule Yes.

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven 25 volt battery in Electrical Workshop Upper Deck amidships. Lights controlled by switch in Engineers entrance. Budda Dr.

Navigation Lamps, are these separately wired Yes, controlled by separate switch and separate fuses Yes.

Are the fuses double pole Yes, are the switches and fuses grouped in a position accessible only to the officers on watch Yes

as each navigation lamp an automatic indicator as per Rule Yes, are separate screens provided for the use of oil and electric side lights Yes.

Are separate oil lanterns provided for the mast head lights and side lights Yes.

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

Are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected

Are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected? No

....., how are the cables led

Where are the controlling switches situated ✓

Archlight Lamps, No. of One, whether fixed or portable portable, are their fittings as per Rule Yes.

c Lamps, other than searchlight lamps, No. of _____, are their life parts insulated from the frame or case _____, are their fittings as per Rule _____

Motors, are their working parts readily accessible Yes, are the coils self-contained and readily removable for replacement Yes,

the brushes, brush holders, terminals and lubricating arrangements as per Rule Yes, are the motors placed in well-ventilated compartments in which

Flammable gases cannot accumulate and clear of all inflammable material Yes

they protected from mechanical injury and damage from water, steam or oil Yes are their axis of rotation fore and aft Yes

situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type

✓, if not of this type, state distance of the combustible material horizontally or vertically above the motors ✓ and ✓

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed as per Rule: Yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule _____

ps carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes,

on and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings

portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office ☒

PARTICULARS OF GENERATING PLANT.								
DESCRIPTION OF GENERATOR.	No of	RATED AT				Back driven by.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	2	200.	220.	910.	200.	a 4 cylinder 400 mm dia x 500 mm stroke Diesel Engine.	-	
AUXILIARY	-	-	-	-	-	-	-	
EMERGENCY	-	-	-	-	-	-	-	
ROTARY TRANSFORMER	-	-	-	-	-	-	-	

[illegible]

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor, Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current, Amperes.	Approximate Length, (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP	1	.045	19	.042"	85 ✓	148	R. I. L.	L. I. L. B.
	MAIN BILGE LINE PUMPS ...	1	.045	19	.042"	40 ✓	164	Do	Do
	GENERAL SERVICE PUMP ...								
	EMERGENCY BILGE PUMP ...								
	^{60ccs} SANITARY PUMP	2	.150	34	.042"	133 ✓	220	Do	Do
	CIRC. SEA WATER PUMPS ...								
	CIRC. FRESH WATER PUMPS ...				(2 in parallel)				
	AIR COMPRESSOR	1	.500	61	.103	645 ✓	208	Do	Do
	FRESH WATER PUMP	1	.0225	4	.064	15 ✓	142	Do	Do
	ENGINE TURNING GEAR	2	.045	19	.042"	41 ✓	112	Do	Do
	ENGINE REVERSING GEAR ...								
	LUBRICATING OIL PUMPS ...	2	.045	19	.042"	40 ✓	42	Do	Do
	OIL FUEL TRANSFER PUMP ...	1	.0225	4	.064	33.5 ✓	92	Do	Do
	WINDLASS	1	.300	34	.103	345 ✓	210	Do	Do
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR	2	.200	34	.083"	153 ✓	442	Do	Do
	WORKSHOP MOTORS	1	.003	3	.036	5.35 ✓	104	Do	Do
	VENTILATING FANS	2	.004	4	.036	10.4 ✓	232	Do	Do
	CO ₂ Compressors	2	.50	34	.042"	13 ✓	140	Do	Do
	Piston Cooling Pumps	1	.045	19	.042"	28 ✓	332	Do	Do
	Scum Pumps	2	.0225	4	.064	28 ✓	244	Do	Do
	Hot Salt Water Pumps	1	.040	19	.032"	25 ✓	352	Do	Do
	Ref. Oil Pump	1	.003	3	.036	3.5 ✓	180	Do	Do
	Ref. Oil Pump	1	.004	4	.036	15.4 ✓	188	Do	Do
	3 Ton Winches	2	.045	19	.042"	43 ✓		Do	Do
	5 Ton Winches	4	.100	19	.083"	120 ✓		Do	Do
	4 Ton Winches	4	.130	34	.042"	155 ✓		Do	Do
	6cc Variable Winches	6	.200	34	.083"	190 ✓		Do	Do

All Conductors are of annealed copper conforming to British Standard Specification No. 7.

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description of



Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass *Generators 100 feet. Nearest motor 40 ft.*

Distance between electric generators or motors and steering compass *92 feet " " 38 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying *2.9* Amperes *9* feet from standard compass *10* feet from steering compass.

A cable carrying *4* Amperes *12* feet from standard compass *10* feet from steering compass.

A cable carrying _____ Amperes _____ 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 *all* course in the case of the standard compass, and *nil* degrees on *all* course in the case of the steering compass.

For HARLAND & WOLFF, LTD.

Builder's Signature.

Date

Is this installation a duplicate of a previous case *No* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c.)

This installation is fitted in accordance with the Rules & in a satisfactory manner. The Machinery was tried under full working & overload conditions and the Diesel Engines, generators & motors were found to be in good & safe working condition.

Elec. Light.
G.P.
2/6/24

Total Capacity of Generators *400.* Kilowatts

The amount of Fee ... £ *41 10 0* When applied for, *May 24 1924*

Travelling Expenses (if any) £ *✓* : *See last book.* When received, *See last book.*

Committee's Minute

Assigned

William Butler.
Surveyor to Lloyd's Register of Shipping.