

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 10 MAR 1930

Received at London Office

Date of writing Report

19

When handed in at Local Office

8 March 1930 Port of Belfast

No. in Survey held at

Belfast

Date, First Survey

5 June 1929

Last Survey

3<sup>rd</sup> Mar 1930

Reg. Book.

(Number of Visits.....)

37059

on the

"H.M. Prince"

Built at

Belfast

By whom built

Harland & Wolff Ltd

Yard No. 697

When built

1930

Owners

Belfast S.S. Co Ltd

Port belonging to

Belfast

Electric Light Installation fitted by

Harland & Wolff Ltd

Contract No. 697

When fitted 1930

System of Distribution

Two wire direct current to distribution boxes

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 rating

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, clearly marked, and furnished with sockets

Yes

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

short circuited, or touched

Yes

Are the lubricating arrangements of the generators as per Rule

Yes

Position of Generators

In auxiliary engine room, forward of main engine 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 axes 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

In auxiliary engine room on platform above main generators

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, non-ignitable 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 insulated from the slab

with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework

and is the frame effectively earthed

Yes

Are the fittings as per Rule regarding:— spacing or shielding of live parts

Yes

, accessibility of all parts

Yes

, absence of fuses on back of board

, 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

connected to bus-bars by double pole, overload & time limit circ. breaker & equalizer

switch. Each outgoing circuit has D.P. overload circ. breaker or D.P. switch & fuses

Instruments on main switchboard

4

ammeters

2

voltmeters arranged 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 indicators

lamps connected to bus-bars by double pole switch & fuses

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

Yes

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

Yes



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LR 31163(112)



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

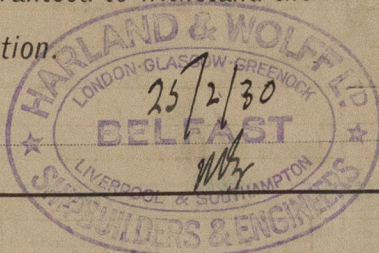
MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP ... ..	1	.04	19	.032	56	288	Rubber.	Hard Rubber
	MAIN BILGE LINE PUMPS ...	1	.01	7	.044	28	234	"	" "
	General SERVICE PUMP ...	2	.002	3	.029	6	60	"	" "
	EMERGENCY BILGE PUMP ...	1	.04	19	.032	48	330	"	Lead Covered
	SANITARY PUMP ... ..	1	.075	19	.072	88	120	"	Hard Rubber
	CIRC. SEA WATER PUMPS ...	1	.075	19	.072	88	120	"	" "
	CIRC. FRESH WATER PUMPS	—	—	—	—	—	—	—	—
	AIR COMPRESSOR ... ..	2	.50	61	.103	380	98	"	" "
	FRESH WATER PUMP ... ..	2	.0045	7	.029	14	147	"	" "
	ENGINE TURNING GEAR ...	2	.0225	7	.064	40	150	"	" "
	ENGINE REVERSING GEAR ...	—	—	—	—	—	—	"	" "
	LUBRICATING OIL PUMPS ...	2	.10	19	.083	112	210	"	" "
	OIL FUEL <del>TRANSFER</del> PUMP	1	.0045	7	.029	16	228	"	" "
	WINDLASS ... ..	1	.50	61	.103	465	80	"	" "
	WINCHES, FORWARD ...	2	.06	19	.064	92	250	"	" "
	WINCHES, AFT ... ..	1	.06	19	.064	92	80	"	" "
	STEERING GEAR—								
	(a) Motor GENERATOR...	2	.03	19	.044	44	600	"	" "
	(b) MAIN MOTOR ... ..	2	.03	19	.044	44	600	"	" "
	VALVE GEAR ... ..	1	.002	3	.029	4	200	"	" "
	Ventilating Motors ... ..	3	.007	7	.036	23	200	"	" "
	" " ... ..	4	.003	3	.036	10.4	200	"	" "
	" " ... ..	3	.002	3	.029	6.8	180	"	" "
	" " ... ..	1	.002	3	.029	4.5	180	"	" "
	" " ... ..	2	.003	3	.036	4.25	195	"	" "
	" " ... ..	1	.002	3	.029	2	330	"	" "
	" " ... ..	1	.002	3	.029	2.5	120	"	" "



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.



Electrical Engineers.

Date 25/2/30

#### COMPASSES.

Distance between electric generators or motors and standard compass 66' to generators 30' to nearest motor.

Distance between electric generators or motors and steering compass 60' " " 27' " " "

The nearest cables to the compasses are as follows:—

A cable carrying 6.5 Ampères 7 feet from standard compass 7 feet from steering compass.

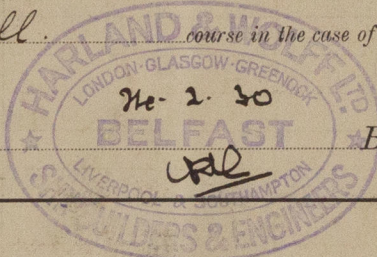
A cable carrying 16 Ampères 7 feet from standard compass 7 feet from steering compass.

A cable carrying 13 Ampères 15 feet from standard compass 10 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.



Builder's Signature.

Date 25/2/30

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

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

This work has been done under special survey. The materials and workmanship are sound and good. The installation has been tried out under full working conditions with satisfactory results. In my opinion the vessel is eligible for notation "Electric Light"

It is submitted that  
this vessel is eligible for  
THE RECORD.

Elec. Light

13/3/30

Total Capacity of Generators 337 1/2 Kilowatts.

The amount of Fee ... £ 39 : 18. 9. : 5<sup>th</sup> Mar 1930

Travelling Expenses (if any) £ : : 26. 3. 30

R. Lee Annes

Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 18 MAR 1930

Assigned Elec. Lt.

1m.127.—Transfer.  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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