

Rpt. 13.

No. 11524

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office MAY 1935

Date of writing Report 19 When handed in at Local Office 16 May 1935 Port of BELFAST

No. in Survey held at BELFAST Date, First Survey 31<sup>st</sup> Jan Last Survey 11 May 1935  
Reg. Book. (Number of Visits 17)

on the STEEL SINGLE SCREW VESSEL "ROTHESAY CASTLE"

Built at BELFAST By whom built HARLAND & WOLFF LTD. Yard No. 944 When built 1935.

Owners UNION CASTLE MAIL STEAMSHIP CO. LTD. Port belonging to LONDON.

Electric Light Installation fitted by HARLAND & WOLFF LTD. Contract No. 944 When fitted 1935

Is the Vessel fitted for carrying Petroleum in bulk NO.

System of Distribution TWO-WIRE DIRECT CURRENT

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 MOTOR ROOM HOLD LEVEL (TWO PORT &amp; ONE STARBOARD)

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 ON PLATFORM AT AFT. END OF 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, 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 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 FOR EACH GENERATOR, ONE 1500 AMP D.P. CIRCUIT BREAKER % & REVERSE CURRENT TRIPS, WITH TIME LAG INTERLOCKED WITH 800AMP EQUALISER SWITCH. OUTGOING CIRCUITS TO MASTERBOARDS HAVE EACH ONE D.P. CIRCUIT BREAKER WITH %L. TRIP & TIME LAG, TO OTHER CIRCUITS. ONE D.P. CIRCUIT BREAKER WITH %L. TRIP & NO TIME LAG OR S.P. KNIFE SWITCH AND D.P. ZED TYPE FUSES.

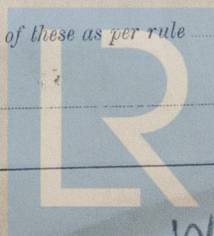
Instruments on main switchboard 3 ammeters 2 voltmeters ARRANGED for paralleling purposes.

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

EACH POLE WITH D.P. SWITCH &amp; 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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If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office .....

W450-0105



W450-0105 3/4

## FRESH WATER PUMP

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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 ... ..	3	300	220	1364	270	DIESEL ENGINES		
AUXILIARY ... ..								
EMERGENCY ... ..								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR ... ..	3	2.25	91	.103	1364	1383 ✓	150	RUBBER	HARD RUBBER
EQUALISER CONNECTIONS ...	2	1.2	91	.093	-	768 ✓	75	DO.	DO.
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER { MOTOR ...									
GENERATOR ...									
MOTOR ROOM LIGHTING ...	1	.01	7	.044	13	31 ✓	90	RUBBER	HARD RUBBER
MOTOR ROOM DO ...	1	.01	7	.044	25	31 ✓	160	DO.	DO.
AUXILIARY SWITCHBOARDS ...									
" " A & B POWER	2	1.0	61	.103	677	844 ✓	600	DO.	DO.
" " C	1	.6	91	.093	358	384 ✓	360	DO.	DO.
" " D	1	.25	37	.093	200	214 ✓	450	DO.	DO.
" " E. (REFRIG.)	4	3.0	91	.103	1842	1844 ✓	75	DO.	DO.
" " ENG. WORK-SHOP	1	.06	19	.064	48	83 ✓	210	DO.	DO.
ACCOMMODATION ... ..									
MASTERBOARD "A" LIGHTING	1	.04	19	.052	54	64 ✓	220	DO.	DO.
DO. COOKING	1	.04	19	.052	51	64 ✓	220	DO.	DO.
WIRELESS ... ..	1	.007	7	.036	-	24 ✓	225	DO.	DO.
ELBE LIGHT CONN. ONLY ...	1	.002	3	.029	2.27	7.8 ✓	320	DO.	DO.
MASTHEAD LIGHT ... ..	1	.002	3	.029	.18	7.8 ✓	900	DO.	DO.
SIDE LIGHTS ... ..	1	.002	3	.029	.18	7.8 ✓	66	DO.	DO.
COMPASS LIGHTS ... ..	1	.002	3	.029	.09	7.8 ✓	20	DO.	DO.
STERN LIGHTS ... ..	1	.002	3	.029	.18	7.8 ✓	1080	DO.	DO.
CARGO LIGHTS { FORWARD ...	1	.0225	7	.064	33	46 ✓	300	DO.	DO.
AFT ...	1	.010	7	.044	16	31 ✓	300	DO.	DO.
ARC LAMPS ... ..									
HEATERS MASTERBOARD "A"	1	.200	37	.083	170	184 ✓	220	DO.	DO.

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP ... ..	1	1	.06	19	.064	77	83 ✓	240	RUBBER	HARD RUBBER
MAIN BILGE LINE PUMPS ...	1	1	.04	19	.052	59	64 ✓	180	DO.	DO.
GENERAL SERVICE PUMP ...										
EMERGENCY BILGE PUMP ...										
SANITARY PUMP ... ..	1	1	.04	19	.052	56	64 ✓	270	RUBBER	HARD RUBBER
CIRC. SEA WATER PUMPS ...	2	1	.10	19	.083	118	118 ✓	240	DO.	DO.
CIRC. FRESH WATER PUMPS ...	1	1	.075	19	.072	93	97 ✓	270	DO.	DO.
AIR COMPRESSOR ... ..	2	1	.20	37	.083	159	184 ✓	240	DO.	DO.
FRESH WATER PUMP ... ..	1	1	.01	7	.044	28	31 ✓	280	DO.	DO.
ENGINE TURNING GEAR ...	1	1	.04	19	.052	60	64 ✓	40	DO.	DO.
ENGINE LIFTING GEAR ...	1	1	.007	7	.036	20	24 ✓	120	DO.	DO.
LUBRICATING OIL PUMPS ...	2	1	.5	61	.103	310	332 ✓	90	DO.	DO.
OIL FUEL TRANSFER PUMP ...	2	1	.01	7	.044	30	31 ✓	150	DO.	DO.
WINDLASS ... ..	1	1	.3	37	.103	270	283 ✓	150	DO.	DO.
WINCHES, FORWARD ... ..	4	1	.1	19	.083	120	142 ✓	90	DO.	DO.
" " MIDSHIP ... ..	2	1	.1	19	.083	120	142 ✓	120	DO.	DO.
WINCHES, AFT ... ..	4	1	.1	19	.083	120	142 ✓	90	DO.	DO.
WARPING WINCH ... ..	1	1	.2	37	.083	200	204 ✓	90	DO.	DO.
STEERING GEAR—										
(a) ... ..										
(b) MAIN MOTOR ... ..	2	1	.12	37	.064	120	130 ✓	80	DO.	DO.
WORKSHOP MOTOR ... ..	4	1	.003	3	.036	8	12 ✓	120	DO.	DO.
VENTILATING FANS. MOTOR ...	1	1	.003	3	.036	8	12 ✓	310	DO.	DO.
VENTILATING FANS TUNNEL ...										
C.O <sub>2</sub> COMPRESSOR ... ..	3	1	.85	127	.093	510	512 ✓	180	DO.	DO.
BRINE PUMP 12 B.H.P. ...	3	1	.03	19	.044	47.5	53 ✓	150	DO.	DO.
" " 8 1/2 " ... ..	2	1	.0225	7	.064	34	46 ✓	150	DO.	DO.
REFRIG. CIRC. WATER PUMP ...	2	1	.03	19	.044	51	53 ✓	200	DO.	DO.
HALL MARK REFRIG. MOTOR ...	2	1	.003	3	.036	8	12 ✓	30	DO.	DO.
AUX. S.W. PUMP ... ..	2	1	.010	7	.044	30	31 ✓	180	DO.	DO.

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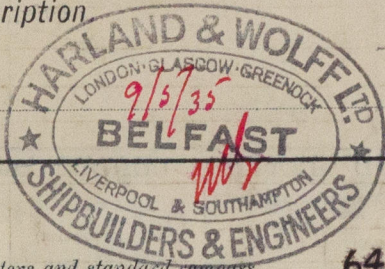
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All Conductors are of annealed copper conforming to British Standard Specification No. 7.

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 9<sup>th</sup> May 1935

#### COMPASSES.

Distance between electric generators or motors and standard compass 64 FEET FROM NEAREST MOTOR.

Distance between electric generators or motors and steering compass 60 FEET " " "

The nearest cables to the compasses are as follows:—

A cable carrying 0.09 Ampères ON feet from standard compass — feet from steering compass.

A cable carrying 0.09 Ampères — feet from standard compass ON feet from steering compass.

A cable carrying 0.7 Ampères 8 feet from standard compass 4 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

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 13 May 1935

Is this installation a duplicate of a previous case

Similar to

If so, state name of vessel

"Roslin Castle"

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

The Electrical Installation is in accordance with the approved plans & the Rules. The generators were built under survey. Insulation tests have been made with satisfactory results. In our opinion the vessel is now eligible for the Society's Classification

W.H.D.

L.Y.

22/5/35.

AL

Total Capacity of Generators 900 Kilowatts.

The amount of Fee ... £ 54 : —

When applied for,

16 May 1935

Travelling Expenses (if any) £ :

When received,

30.5 1935 31/5

R. Lee Amess & Charles Hunter  
Surveyors to Lloyd's Register of Shipping.

Committee's Minute

FRI. 24 MAY 1935

Assigned

See minute on  
J.E. Rpt.



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