

RETAIN

Rpt. 13.

No. 28782

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

11 MAY 1924

Date of writing Report 19 When handed in at Local Office 30 APR 1924 Port of SUNDERLAND.

No. in Survey held at SUNDERLAND. Date, First Survey 19th March 1924 Last Survey 1st April 1924
Reg. Book. (Number of Visits.....)

on the S. S. "Goathland" Tons { Gross 3821 Net 2273

Built at SUNDERLAND. By whom built R. Thompson & Sons. Yard No. 320 When built 1924.

Owners Lowland & Mauwood's S.S. Co. Port belonging to Whitby

Electric Light Installation fitted by Clarke, Chapman & Co. Ltd. Contract No. When fitted 1924.

Alban

System of Distribution Double wire ✓

Pressure of supply for Lighting 100 ✓ volts, Heating — volts, Power — volts.

Direct or Alternating Current, Lighting Direct ✓ Power —

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 ✓

Generators, do they comply with the requirements regarding overload ✓, are they compound wound ✓

are they over compounded 5 per cent. ✓, if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel —, is an adjustable regulating resistance fitted in series with each shunt field ✓

Are all terminals accessible and clearly marked ✓, are they so spaced or shielded that they cannot be accidentally earthed, or short circuited ✓ Are the lubricating arrangements of the generators as per Rule ✓

Position of Generators Engine Room starboard side ✓, is the ventilation in way of the generators satisfactory ✓, are they clear of all inflammable material ✓

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 ✓

are their axis of rotation fore and aft ✓

Earthing, are the bedplates and frames of the generating plant efficiently earthed ✓ are the prime movers and their respective generators in metallic contact ✓

Main Switch Boards, where placed Engine Room. 1 line bulkhead

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 ✓, are they protected from mechanical injury and damage from water, steam or oil ✓, 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 ✓, is all insulation of high dielectric strength and of permanently high insulation resistance ✓, 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 ✓, and is the frame effectively earthed ✓

Are the following fittings as per Rule, viz.: — spacing or shielding of live parts ✓, accessibility of all parts ✓, absence of fuses on back of board ✓, proportion of omnibus bars ✓

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Double pole switch ✓, individual fuses to voltmeter, pilot or earth lamp ✓, connections of switches ✓

4 fuses on dynamo main, on each outgoing circuit single pole switch & double pole fuses.

Instruments on main switchboard 1 ammeter. 1 voltmeter. — 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 ✓, connected to earth through double pole switch & fuses

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

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

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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 3.62 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 Yes

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 Armoured & braided cables slip lead to underside of deck through hidden compartments lead covered cable in accommodation
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 armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VI Yes

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

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

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

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

Earthing Connections, state what earthing connections are fitted and their respective sectional areas _____

_____, are their connections made as per Rule _____

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 None fitted

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

has 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 _____

_____, how are the cables led _____

where are the controlling switches situated _____

Searchlight Lamps, No. of _____, whether fixed or portable _____, are their fittings as per Rule _____

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

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

are the brushes, brush holders, terminals and lubricating arrangements as per Rule _____, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material _____

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

if 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 _____

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

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings _____

If 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				DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	1	8	100	80	400	Single cylinder steam engine		
AUXILIARY ...								
EMERGENCY ...								
ROTARY TRANSFORMER								

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
1.	MAIN GENERATOR...	2	.07592	19	14	80	20	Pure rubber	Lead covered cable
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
2	ENGINE ROOM ...	2	.0125	7	18	5.2	28	Pure Rubber	Lead Armoured
	BOILER ROOM ...								
3	Salon & stowage	2	.0132	7	17	26.5	135	" "	Armoured Braided
4	Engine	2	.0125	7	18	7.9	60	" "	" "
5	apt	2	.0050	7	14	6.1	168	" "	" "
6	Whaler	2	.0070	7	20	15	140	" "	" "
7	WIRELESS ...	2	.0040	7	20	15	140	Pure Rubber	Armoured Braided
	SEARCHLIGHT								
8	MASTHEAD LIGHT...	2	.0018	1	18	1.1	145	" "	In case of fire
9	SIDE LIGHTS ...	2	.0018	1	18	1.1	40	" "	Lead covered
10	COMPASS LIGHTS ...	2	.0018	1	18	1.1	20	" "	" "
11	DECK LIGHTS ...	2	.0018	1	18	1.1	325	" "	Armoured Braided
12	CARGO LIGHTS ...	2	.0042	7	22	8.9	25	" "	Lead covered
	ARC LAMPS ...								
	HEATERS ...								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP ...								
	MAIN BILGE LINE PUMPS ...								
	GENERAL SERVICE PUMP ...								
	EMERGENCY BILGE PUMP ...								
	SANITARY PUMP ...								
	CIRC. SEA WATER PUMPS ...								
	CIRC. FRESH WATER PUMPS ...								
	AIR COMPRESSOR ...								
	FRESH WATER PUMP ...								
	ENGINE TURNING GEAR ...								
	ENGINE REVERSING GEAR ...								
	LUBRICATING OIL PUMPS ...								
	OIL FUEL TRANSFER PUMP ...								
	WINDLASS ...								
	WINCHES, FORWARD ...								
	WINCHES, AFT ...								
	STEERING GEAR ...								
	WORKSHOP MOTOR ...								
	VENTILATING FANS ...								

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.
For Clarke, Chapman & Co. Ltd.

H. Walker Chairman

Electrical Engineers.

Date April 17th 1924

COMPASSES.

Distance between electric generators or motors and standard compass 112 ft

Distance between electric generators or motors and steering compass 106 "

The nearest cables to the compasses are as follows:—

A cable carrying .5 Ampères 12 feet from standard compass 6 feet from steering compass.

A cable carrying .5 Ampères 6 feet from standard compass 12 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 all course in the case of the standard compass, and nil degrees on all course in the case of the steering compass.

By Robert Thompson & Sons Ltd.

[Signature]
Secretary

Builder's Signature.

Date April 24th 1924

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. The installation has been satisfactorily fitted, tested and found good.)

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

[Signature]
6/5/24

Total Capacity of Generators 8 Kilowatts

The amount of Fee ... £ 8 : When applied for, 12 April 24

Travelling Expenses (if any): £ : When received, 12 April 24

[Signature]

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Im. 3.22.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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