

Rpt. 13.

No. 16878

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

13 MAR 1930

Received at London Office

Date of writing Report

19

When handed in at Local Office

12.3.

19

30 Port of

WEST HARTLEPOOL

No. in Survey held at

West Hartlepool

Date, First Survey 10 Sept.

Last Survey 23 Oct 1929

Reg. Book.

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

40025. on the S.S. "DUNELMIA"

Tons

Gross 5207

Net 3220

Built at West Hartlepool By whom built Wm Gray & Co Ltd

Yard No. 1028.

When built 1929.

Owners Metcalfe Shipping Co Ltd.

Port belonging to West Hartlepool

Electric Light Installation fitted by

Messrs Clarke Chapman & Co Contract No.

When fitted 1929.

System of Distribution

Double wire

Pressure of supply for Lighting

110

vols, Heating

vols, Power

vols.

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 *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, 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*

Position of Generators Are the lubricating arrangements of the generators as per Rule *yes*

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 *Engine room starboard side*

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

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 *yes*

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*

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 *Double pole switch*

+ fuses on dynamo mainis, single pole switch + double pole fuses on each outgoing circuit

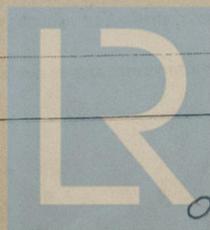
Instruments on main switchboard *one* ammeters *one* voltmeters — synchronising device for paralleling purposes.

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

coupled to earth through switches + 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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Cables: Single, twin, concentric, or multicore *single* are the cables insulated and protected as per Tables IV or V of the Rules *Yes*

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *4 volts*

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 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 *Yes*

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 cable*
 If cables are run in wood casings, are the casings and caps secured by screws *clipped to underside of deck*, are the cables run in separate grooves *Yes*, are the cap screws of brass *Yes*

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 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 Partitions, 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 *Lead*

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule *Yes*, are their connections made as per Rule *Yes*

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven *Yes*

Navigation Lamps, are these separately wired *Yes*, controlled by separate switch and separate fuses *Yes*, are the switches and fuses grouped in a position accessible only to the officers on watch *Yes*, are the fuses double pole *Yes*

Secondary Batteries, are they constructed and fitted as per Rule *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 *no*

Searchlight Lamps, No. of *no*, whether fixed or portable *no*, how are the cables led *no*

Arc Lamps, other than searchlight lamps, No. of *no*, are their fittings as per Rule *no*

Motors, are their working parts readily accessible *no*, are their live parts insulated from the frame or case *no*, are their fittings as per Rule *no*, are the brushes, brush holders, terminals and lubricating arrangements as per Rule *no*, are the coils self-contained and readily removable for replacement *no*, are they protected from mechanical injury and damage from water, steam or oil *no*, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material *no*, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type *no*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *no*, are their axes of rotation fore and aft *no*

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule *no*

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule *no*

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 *no*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *no*

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	7½	110	68	450	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. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	1	.0600	19	.064	68	16	V.I.R.	Lead covered
	EQUALISE CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	1	.0100	7	.044	20.40	40	V.I.R.	Lead Armoured
	BOILER ROOM								
	ACCOMMODATION SALOON 9 Forward	1	.0145	7	.052	20.60	288	Do	Armoured & Braided
	Engineers & Aft	1	.0070	7	.036	13.60	100	Do	Do.
	WIRELESS	1	.0070	7	.026	10	350	Do.	Do.
	SEARCHLIGHT								
	MASTHEAD LIGHT	1	.00194	3	.029	.4	375	Do.	Do.
	SIDE LIGHTS	1	.00152	1	.044	.4	45	Do.	Lead covered
	COMPASS LIGHTS	1	.00152	1	.044	.25	20	Do.	Do.
	STROBE LIGHTS	1	.00152	1	.044	.4	550	Do.	Armoured & Braided
	CARGO LIGHTS	1	.002	70	.0076	.25	120	Do.	Braided & Compounded
	ARC LAMPS								
	HEATERS								

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								
	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								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR								
	WORKSHOP MOTOR								
	VENTILATING FANS								

Assigned

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.

W. W. Taylor Director.

Electrical Engineers.

Date 6/3/30

COMPASSES.

Distance between electric generators or motors and standard compass 256 feet.

Distance between electric generators or motors and steering compass 250 feet.

The nearest cables to the compasses are as follows:—

A cable carrying .25 Ampères on the ~~foot from~~ standard compass 8 feet from steering compass.

A cable carrying .25 Ampères 8 feet from standard compass in the ~~foot 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.

For William Gray & Co., Limited.

Geo. S. Simpson General Manager.

Builder's Signature.

Date 8. 3. 1930.

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 has been fitted under survey.
 The materials and workmanship are good and efficient.
 On completion it was satisfactorily tried under full working conditions*

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

R.D. Shilston
 4/4/30.

Total Capacity of Generators 7.5 Kilowatts.

The amount of Fee ... £ 7 : 10 : 1-11-1929.

Travelling Expenses (if any) £ : : 11-12-1929.

R.D. Shilston
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Elec. Lt.

Im. 928.—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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