

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) Received at London Office 24 NOV 1930

Date of writing Report 19 When handed in at Local Office 19 Nov 1930 Port of BELFAST

No. in Survey held at BELFAST Date, First Survey 23rd Sept 1930 Last Survey 13th Nov 1930 (Number of Visits 9)

Reg. Book. 7116 on the M.V. Foylebank Tons { Gross Net

Built at Belfast By whom built Messrs Harland & Wolff Ltd Yard No. 878 When built 1930

Owners (Andrew Weir & Co Ltd. MARS.) Port belonging to Glasgow BELFAST

Electric Light Installation fitted by Messrs Harland & Wolff Ltd Contract No. 878 When fitted 1930

Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Two wire direct current to masterboards & 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

Position of Generators Port & Starboard motor room 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 On switchboard platform aft 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

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 Generator is connected to bus-bars by double pole, overload & reverse current circuit breaker with Equalizer Switch & Time limits. Each outgoing circuit has double pole change over switch + double pole 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 indicating lamps with change over switch to each set of bus-bars

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

W37-0085 (1/2)



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 6 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 Cables are hard rubber covered and clipped to perforated plating

If cables are run in wood casings, are the casings and caps secured by screws Yes, are the cap screws of brass Yes, are the cables run in separate grooves Yes. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII 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 all joints are made in properly constructed junction boxes

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 all portable fittings sockets etc fitted to the steel work of the ship are provided with an earthing connection equivalent to working conductor, 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 see Bd 24/130
 STAND-BY Supply, state position and method of control of the emergency supply and how the generator is driven 50 KW, 220 Volt generator driven by steam engine in motor room staloard, connected to main switchboard by double pole overload circuit breaker with time limits

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

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 Yes

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected Yes, how are the cables led Yes

where are the controlling switches situated Yes

Searchlight Lamps, No. of 1, whether fixed or portable Yes, are their fittings as per Rule Yes

Arc Lamps, other than searchlight lamps, No. of 1, are their live parts insulated from the frame or case Yes, are their fittings as per Rule Yes

Motors, are their working parts readily accessible Yes, are the coils self-contained and readily removable for replacement Yes, are the brushes, brush holders, terminals and lubricating arrangements as per Rule Yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material Yes, are they protected from mechanical injury and damage from water, steam or oil Yes, are their axes of rotation fore and aft Yes, 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 Yes, if not of this type, state distance of the combustible material horizontally or vertically above the motors Yes and Yes

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

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

Ships carrying Oil having a Flash Point less than 450 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 Yes

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

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	65	220	295	300	Diesel Engines	Fuel Oil	
AUXILIARY	1	50	220	227	500	Single Cylinder Steam Engine	-	
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	1	.5	61	.103"	295	332	120	Rubber	Hard Rubber	
EQUALISER CONNECTIONS	1	.15	37	.072"	147.5	152	60	"	"	
AUXILIARY GENERATOR	1	.3	37	.103"	227	240	120	"	"	
EMERGENCY GENERATOR	-	-	-	-	-	-	-	-	-	
ROTARY TRANSFORMER	-	-	-	-	-	-	-	-	-	
MOTOR GENERATOR	-	-	-	-	-	-	-	-	-	
ENGINE ROOM	-	-	-	-	-	-	-	-	-	
BOILER ROOM	-	-	-	-	-	-	-	-	-	
AUXILIARY SWITCHBOARDS	-	-	-	-	-	-	-	-	-	
ACCOMMODATION	-	-	-	-	-	-	-	-	-	
WIRELESS	1	.01	7	.044"	20	31	80	Rubber	Hard Rubber	
SEARCHLIGHT	-	-	-	-	-	-	-	-	-	
MASTHEAD LIGHT	1	.002	3	.029"	2	7.8	900	Rubber	Hard Rubber	
SIDE LIGHTS	1	.002	3	.029"	2	7.8	90	"	"	
COMPASS LIGHTS	1	.002	3	.029"	0.8	7.8	20	"	"	
POOP LIGHTS	-	-	-	-	-	-	-	-	-	
CARGO LIGHTS	1	.0048	10	.0076"	9	10.0	154	Rubber	C.T.S.	
ARC LAMPS	-	-	-	-	-	-	-	-	-	
HEATERS	1	.002	3	.029"	5	7.8	48	Rubber	Hard Rubber	

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	.1	19	.083"	104	118	200	Rubber	Hard Rubber
MAIN BILGE LINE PUMPS	1	1	.0145	7	.052"	36	37	120	"	"
FUEL OIL SERVICE PUMP	3	1	.002	3	.029"	4	7.8	80	"	"
EMERGENCY BILGE PUMP	-	-	-	-	-	-	-	-	-	-
SANITARY PUMP	-	-	-	-	-	-	-	-	-	-
CIRC. SEA WATER PUMPS	2	1	.06	19	.064"	78	83	160	"	"
CIRC. SEA WATER PUMPS	1	1	.0045	7	.029"	14	18.2	80	"	"
AIR COMPRESSOR	-	-	-	-	-	-	-	-	-	-
FRESH WATER PUMP	-	-	-	-	-	-	-	-	-	-
ENGINE TURNING GEAR	2	1	.0145	7	.052"	32	37	60	"	"
ENGINE REVERSING GEAR	-	-	-	-	-	-	-	-	-	-
LUBRICATING OIL PUMPS	2	1	.1	19	.083"	108	118	42	"	"
OIL FUEL TRANSFER PUMP	1	1	.0045	7	.029"	16	18.2	90	"	"
WINDLASS	-	-	-	-	-	-	-	-	-	-
WINCHES, FORWARD	-	-	-	-	-	-	-	-	-	-
WINCHES, AFT	-	-	-	-	-	-	-	-	-	-
STEERING GEAR	-	-	-	-	-	-	-	-	-	-
(a) MOTOR GENERATOR	-	-	-	-	-	-	-	-	-	-
(b) MAIN MOTOR	2	1	.1	19	.083"	91	118	440	"	"
WORKSHOP MOTOR	2	1	.003	3	.036"	8	12	30	"	"
VENTILATING FANS	2	1	.0045	7	.029"	12	18.2	60	"	"
PURIFIED F.O. PUMP	2	1	.0045	7	.029"	12	18.2	200	"	"
LUB. OIL PURIFIER	1	1	.0045	7	.029"	6	7.8	96	"	"
FUEL OIL PURIFIER	2	1	.0045	7	.029"	8	18.2	112	"	"
BRINE PUMPS	2	1	.0045	7	.029"	8	18.2	110	"	"
CO2 MOTOR	1	1	.1	19	.083"	106	118	24	"	"

137-0085 (2/2) LHM

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 14/11/30

COMPASSES.

Distance between electric generators or motors and standard compass 32 feet from nearest motor 128 feet from generators

Distance between electric generators or motors and steering compass 28 " " " " 120 " " " "

The nearest cables to the compasses are as follows :-

A cable carrying 2 Amperes 10 feet from standard compass 6 feet from steering compass.

A cable carrying 5 Amperes 16 feet from standard compass 12 feet from steering compass.

A cable carrying 16 Amperes 24 feet from standard compass 16 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 14. 11. 30.

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 special survey. The materials and workmanship are sound and good. It has been tried under 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.

Handwritten signature and date 25/11/30.

Exclude alternative lighting

Total Capacity of Generators 245 Kilowatts.

The amount of Fee ... £ 37 : 12 : 6 When applied for, 19. Nov. 19. 30.

Travelling Expenses (if any) £ : : When received, 16. 12. 19. 30.

Handwritten signature R. Lee Jones, Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRL 28 NOV 1930

Assigned

Handwritten signature Elec Lt



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Lloyd's Register Foundation

Im. 11. 20. - Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)