

Rpt. 13.

ETRURIA
EX

No. 41146

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

27 AUG 1930

Date of writing Report 25.8.30 When handed in at Local Office 26 Aug 30 Port of Hull
 No. in Survey held at HULL Date, First Survey 2 Aug Last Survey 20 Aug 1930
 Req. Book. 61608 on the Steam Trawler "LADY ELSA" (Number of Visits.....)
 Tons { Gross 373.42
 Net 158.21
 Built at Beverley By whom built Cook, Nelson & Gemmell No. 551 When built 1930
 Owners Jutland Amalgamated Trawlers Port belonging to Hull
 Electric Light Installation fitted by W. Broady & Son, Contract No. When fitted 1930.
 Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Two wire.
Pressure of supply for Lighting 100 volts, **Heating** ✓ volts, **Power** ✓ volts.
Direct or Alternating Current, Lighting Direct current **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 Are the lubricating arrangements of the generators as per Rule? Yes
Position of Generators Starboard side of 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 - direct coupled.
Main Switch Boards, where placed? beside generator in engine 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? Double pole linked switch for dynamo: Outgoing circuits controlled by S.P. switches protected by fuses on each pole.
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 with separate switches.
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.

Cables: Single, twin, concentric, or multi-core Both 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 1 Volt
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 None
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 L.C. cables with brass clips. Armoured cables with G.I. clips.
 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 VIII 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 No joints
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 through earth lamps
 , 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
Emergency Supply, state position and method of control of the emergency supply and how the generator is driven None
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 No
Secondary Batteries, are they constructed and fitted as per Rule
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 None
 are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected None
 , 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 axes 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 and fitted 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 ...	One	4 1/2	100	45	360	Steam engine		
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 ...	2	0.064	19	16 WG	45		24	V.I.R		
EQUALISER CONNECTIONS ...										
AUXILIARY GENERATOR ...										
EMERGENCY GENERATOR ...										
ROTARY TRANSFORMER MOTOR GENERATOR ...										
ENGINE ROOM ...	2	0.0018	3	20"	3.5		10	"	L.C. armoured	
BOILER ROOM ...	2	0.0018	3	20"	1.5		40	"	"	
AUXILIARY SWITCHBOARDS ...										
ACCOMMODATION ...	2	0.012	7	18"	12		150	"	"	
Navigation main	2	0.007	7	20"	4		150	"	"	
WIRELESS ...	2	.01	7	18"	10		150	"	"	
SEARCHLIGHT ...										
MASTHEAD LIGHT ...	2	0.0018	3	20"	1		180	"	"	
SIDE LIGHTS ...	2	0.0018	3	20"	1		30	"	L.C.	
COMPASS LIGHTS ...										
POOP LIGHTS ...										
CARGO LIGHTS ...										
ARC LAMPS ...										
HEATERS ...										

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 ...											
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 ...											

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.

WM. BROADY & SON
ENGLISH STREET
LONDON

Electrical Engineers.

Date 14th Aug. 1930.

COMPASSES.

Distance between electric generators or motors and standard compass

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

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

A cable carrying Ampères feet from standard compass 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

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 no degrees on any course in the case of the standard compass, and no degrees on any course in the case of the steering compass.

COOK, WELTON & GEMMELL, LTD.,

Alfred J. J. Builder's Signature.
Secretary & Director.

Date 16th Aug 1930

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

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

of this vessel has been fitted on board under special survey, tried under working conditions and found in good order.

It is eligible, in my opinion, to have record of "Electric Light".

It is recommended that this vessel is eligible for THE RECORD. Elec. Light
B.M.
29/8/30

Total Capacity of Generators 4 1/2 Kilowatts.

The amount of Fee £ 3 : - : When applied for, 26 Aug 30.

Travelling Expenses (if any) £ : : When received, 11.9.30

G. Moffatt.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 29 AUG 1930

Assigned Elec Light

Im.12.23.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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