

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 26.3.1929 when handed in at Local Office 20.4.1929 Port of GLASSGOW. 24 APR 1929

No. in Survey held at GLASSGOW. Date, First Survey 13.2.29 Last Survey 27.3.1929
Ref. Book. (Number of Visits 5)

90679 on the S.S. JUMNA. Tons { Gross 6078
Net

Built at LINTHOUSE By whom built ALEX^S STEPHEN^S SON Yard No. 522 When built 1929

Owners MESSRS JAS. NOURSE LTD Port belonging to LONDON.

Electric Light Installation fitted by MESSRS ALEX^S STEPHEN^S SON^S LTD Contract No. 522 When fitted 1929

System of Distribution Double wire.
Pressure of supply for Lighting 110. volts, Heating nil volts, Power 110 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 overload 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

Are all terminals accessible and clearly marked Yes, are they so spaced or shielded that they cannot be accidentally earthed, or short circuited Yes

Position of Generators Engine Room Starboard Side, 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 Yes, are the generators protected from mechanical injury and damage from water, steam or oil Yes

are their axis 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 Engine Room Starboard Side. Aft of Generator.

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 in same compartment

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, incombustible non-absorbent materials Enamelled Slate, is all insulation of high dielectric strength and of permanently high insulation resistance Yes

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 Holes bushed with micanite.

frame effectively earthed Yes. Are the following fittings as per Rule, viz.:— 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

D.P. Switch + D.P. Fuses for Generator + each outgoing circuit.

Instruments on main switchboard 1 ammeters 1 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 —

2 Earth Lamps and 2 S.P. Switches.

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

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



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L987-0345

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 2 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 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 Lead Covered in Accommodation clipped to Bulkheads, Decks, R.C. & Armoured run on perforated plating in Engine & Boiler Rooms & where liable to damage

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 Yes

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

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 none

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

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 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 none

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

Are 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 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 axis 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 totally Enclosed, if not of this type, state distance of the combustible material horizontally or vertically above the motors nil and nil

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

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

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 nil

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

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	D357	10.0	110	91	300	Single Cylinder Steam Engine	—	—
AUXILIARY						nil.		
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.				
	MAIN GENERATOR	2	1009	19	.083	91	100	V. I. R.	L.C. & Armoured
	AUXILIARY GENERATOR	—							
	EMERGENCY GENERATOR	—							
	ROTARY TRANSFORMER	—							
	AUXILIARY SWITCHBOARDS	—							
	ENGINE ROOM	2	.01462	7	.052	12.6	8.	"	"
	BOILER ROOM	—							
	navigation Rts.	2	.00455	1	.029	5.0	438.	"	"
	Officers Accom.	2	.00701	7	.036	13.0	344.	"	"
	Engineers & Crew.	2	.00701	7	.036	17.9	120.	"	"
	Stew aft.	2	.00455	7	.029	9.1	370.	"	"
	WIRELESS	2	.00701	7	.036	10.	160.	"	"
	SEARCHLIGHT	—							
	MASTHEAD LIGHT	2	.00194	3	.029	.55	320.	"	"
	SIDE LIGHTS	2	.00194	3	.029	.55	120.	"	"
	COMPASS LIGHTS	2	.00194	3	.029	.73	98.	"	"
	POOP LIGHTS	2	.00194	3	.029	.55	150.	"	"
	CARGO LIGHTS	2	.02214	7	.064	33.	130.	"	"
	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								
	Oil Pump	1	.00455	7	.029	7.	190.	V. I. R.	L.C. & Armoured.

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.

Alexander Stephen & Sons Limited,

Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass 125 feet. Wireless 122 feet
 Distance between electric generators or motors and steering compass 120 " 122 "
 The nearest cables to the compasses are as follows:—
 A cable carrying 1.1 Ampères 10 feet from standard compass 6 feet from steering compass.
 A cable carrying .43 Ampères 12 feet from standard compass 8 feet from steering compass.
 A cable carrying 1.5 Ampères 14 feet from standard compass 6 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 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.

FOR ALEXANDER STEPHEN & SONS, LIMITED.

A. M. Stephen, Director

Builder's Signature.

Date

10/4/29

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 on board under special survey. Tested under full working conditions and found satisfactory. The materials and workmanship were found to be good and sound.

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

JRM

26.4.29

Total Capacity of Generators 10 Kilowatts

The amount of Fee ... £ 10.00 : 18 APR 1929

Travelling Expenses (if any) £ :

When received, 7.6.29

J. S. Rankin, Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 23 APR 1929

Assigned

Elec. Light.

JRM

Im. 924.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

a.l.
13/4/29

