

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 16 MAY 1930

Received at London Office.....

Date of writing Report 19... When handed in at Local Office 10/5/1930 Port of Newcastle-on-Tyne

No. in Survey held at Newcastle Date, First Survey 24 March Last Survey 9 April 1930
Reg. Book. (Number of Visits 4)

on the "Northumbrian" Tons { Gross Net

Built at Hebburn By whom built R. & W. Hawthorn Leslie & Co. Ltd. Yard No. 573 When built 1930

Owners Tyne Improvement Commission Port belonging to

Electric Light Installation fitted by R. & W. Hawthorn Leslie & Co. Ltd. Contract No. 573. When fitted 1930

Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Double Wire

Pressure of supply for Lighting 110 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 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 Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators Engine Room, Port Side

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, Port 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 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, 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, 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

Triple pole Breaker for each Generator - Double Pole Switches and fuses on each

outgoing circuit - Centre contact in Breakers used for Equalizer connections

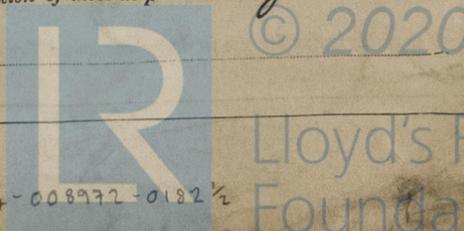
Instruments on main switchboard 2 ammeters 2 voltmeters synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system 2 Earth Lamps with

necessary fuses and 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



Lead covered in Accommodation
Single lead covered and armoured in machinery spaces & store rooms

Cables: Single, twin, concentric, or multicore 1 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 Lead covered cable in Accommodation clipped to decks or bulkheads, armoured cable in m/cy. Spaces clipped to perforated steel plates.

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 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. 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

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

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 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	2	6	110	54.5	350	Vertical open type		
AUXILIARY						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	.03960	19	.052	28.4	64	60	V. J. R.	Lead covered & Armoured	
EQUALISER CONNECTIONS										
AUXILIARY GENERATOR										
EMERGENCY GENERATOR										
ROTARY TRANSFORMER MOTOR GENERATOR										
ENGINE ROOM AND BOILER ROOM	1	.00701	7	.036	7.3	24	25	V. J. R.	Ditto	
AUXILIARY SWITCHBOARDS										
ACCOMMODATION UPPER DECK	1	.00701	7	.036	14.5	24	25	V. J. R.	Ditto	
Holds, Store Rooms, etc.	1	.00701	7	.036	3.3	24	25	V. J. R.	Ditto	
Navigation	1	.00455	7	.029	3.3	24	140	V. J. R.	Lead covered	
WIRELESS										
SEARCHLIGHT										
MASTHEAD LIGHT	1	.00322	1	.064	.36	12.9	40	V. J. R.	Ditto	
SIDE LIGHTS	1	.00322	1	.064	.36	12.9	80	V. J. R.	Ditto	
COMPASS LIGHTS	1	.00322	1	.064	.36	12.9	20	V. J. R.	Ditto	
STERN POPE LIGHT	1	.00322	1	.064	.36	12.9	250	V. J. R.	Ditto	
CARGO LIGHTS										
ARC LAMPS										
HEATEES										

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.

FOR R. & W. HAWTHORN, LESLIE & Co. LIMITED

Mr. J. M. Smith

Electrical Engineers.

Date 7/5/30

COMPASSES.

Distance between electric generators or motors and standard compass

Distance between electric generators ~~and motors~~ and steering compass 45 feet

The nearest cables to the compasses are as follows:—

A cable carrying 36 Ampères ~~feet from standard compass~~ 6 feet from steering compass.

A cable carrying 3.3 Ampères ~~feet from standard compass~~ 6 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.

FOR R. & W. HAWTHORN, LESLIE & Co. LIMITED.

Mr. J. M. Smith

Builder's Signature.

Date 7/5/30

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.)

The above installation is in accordance with the Society's Rules. The vessel is eligible in my opinion for notation elec light

It is submitted that this vessel is eligible for THE RECORD. Elec. Light W.M. 19/5/30

Total Capacity of Generators 12 Kilowatts.

The amount of Fee ... £ 6 : - :

When applied for,	<u>24.4.19.30</u>
When received,	<u>28.4.19.30</u>

Travelling Expenses (if any) £ : :

W.T. Badger
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned Elec. Lt.

1m.12.28.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

