

Rpt. 18.

No. 31077

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

10 NOV 1932

Date of writing Report

19

When handed in at Local Office

9 NOV. 1932

Port of SUNDERLANDNo. in Survey held at SUNDERLAND
Reg. Book.Date, First Survey Oct 13 Last Survey Oct 26 1932

(Number of Visits.....3.....)

79160 on the SS. WANDLE

Tons

Gross 1481 1/2Net 1195 7/8Built at BURNTISLANDBy whom built BURNTISLAND S.B. CO. LTD.Yard No. 173When built 1932Owners WANDSWORTH & DISTRICT GAS COPort belonging to LONDONElectric Light Installation fitted by BURNTISLAND S.B. CO. LTD.

Contract No.

When fitted 1932Is the Vessel fitted for carrying Petroleum in bulk No**System of Distribution**TWO 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

series with each shunt field

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 (STARBOARD 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

4 1/2 FEET ✓

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

BOLTED DIRECT TO EARTH. ✓

are the prime movers and

their respective generators in metallic contact

YES ✓

Main Switch Boards, where placed

ENGINE ROOM ON STARBOARD SIDE OF SHIP. ✓

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

5 FEET ✓

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 effectually earthed

BOLTED DIRECT TO EARTH. ✓

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 POLEKNIFE TYPE MAIN SWITCH, AND SINGLE POLE KNIFE TYPE SWITCHES FOROUTGOING CIRCUITS. WITH DOUBLE POLE FUSES ON ALL CIRCUITS. ✓

Instruments on main switchboard

ONE ✓

ammeter

ONE ✓

voltmeter

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

TWO EARTHLAMPS CONNECTED TO EARTH THROUGH SWITCHES AND 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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Lloyd's Register
Foundation

Cables: Single, twin, concentric, or multicore TWIN 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 3 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 —

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 SUPPORTED WITH METAL CLIPS
SCREENED TO DECK, AND WHERE NECESSARY PROTECTED WITH LEAD AND WIRE ARMOURS

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 IN PORCELAIN CONNECTION BOXES PROTECTED WITH METAL COVERS.

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 SWITCH-BOARD FRAME AND DYNAMO BEDPLATE BOLTED DIRECT TO EARTH
—, 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 —

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 —

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
are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected NO
—, 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 —

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 —, 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	3	110	27	450	OPEN TYPE 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 ...	1	.0225	7	.064	20	46	9	RUBBER	L.C. & W.A.
EQUALISER CONNECTIONS ...									
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER { MOTOR GENERATOR ...									
ENGINE ROOM ...	1	.0070	7	.036	5.6	24	6	RUBBER	L.C. & W.A.
BOILER ROOM ...									
AUXILIARY SWITCHBOARDS ...									
ACCOMMODATION ...									
SALOON	1	.0030	3	.036	4	12	165	RUBBER	WIRE ARMoured
CREW'S ACCOMMODATION	1	.0030	3	.036	4.5	12	70	"	"
NAVIGATION	1	.0030	3	.036	5	12	160	"	"
WIRELESS ...									
SEARCHLIGHT ...	1	.0020	3	.029	.36	7.8	90	RUBBER	WIRE ARMoured
MASTHEAD LIGHT ...	1	.0020	3	.029	.36	7.8	40	"	LEAD COVERED
SIDE LIGHTS ...	1	.0020	3	.029	.22	7.8	30	"	"
COMPASS LIGHTS ...	1	.0020	3	.029	.36	7.8	170	"	WIRE ARMoured
STERN LIGHT	1	.0020	3	.029	.36	7.8			
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.

FOR THE BURNTISLAND SHIPBUILDING COMPANY LTD.

A. L. Hople

Electrical Engineers.

Date _____

MANAGING DIRECTOR.

COMPASSES.

Distance between electric generators or motors and standard compass 123 FEET ✓

Distance between electric generators or motors and steering compass 120 FEET ✓

The nearest cables to the compasses are as follows:—

A cable carrying 72 Ampères 3 feet from standard compass 2 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 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 ANY course in the case of the standard

compass, and NIL degrees on ANY course in the case of the steering compass.

FOR THE BURNTISLAND SHIPBUILDING COMPANY LTD.

A. L. Hople

Builder's Signature.

Date _____

MANAGING DIRECTOR.

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 and has been tested under full working conditions and found satisfactory. The materials and workmanship have been found to be good and sound.

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

cm.
11/11/32.

Total Capacity of Generators 3 Kilowatts.

The amount of Fee ... £ 5 : - : When applied for, 4 Nov. 1932

Travelling Expenses (if any) £ : : When received, 5 Nov. 1932

R. C. Clayton

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Elec Light



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