

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

THU FEB 22 1923

Date of writing Report 14/2/23 When handed in at Local Office 21 FEB 1923 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Sunderland Date, First Survey 9/11/22 Last Survey 9/2/1923
Reg. Book. Subh (Number of Visits.....)78222 on the British Lady. Tons { Gross 6098
Net 3560

Built at Sunderland By whom built Messrs J. Thompson & Sons Yard No. 548 When built 1923

Owners British Tanker Co. Port belonging to London

Electric Light Installation fitted by Sunderland Forge & Engineering Co. Contract No. 548 When fitted 1923

System of Distribution Power: 3 phase Alternating, Lighting: 110 D.C. two wire

Pressure of supply for Lighting 110 volts, Heating - volts, Power 220 volts.

Direct or Alternating Current, Lighting Direct Power Alternating

If alternating current system, state frequency of periods per second 50

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 yes

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

or short circuited yes Are the lubricating arrangements of the generators as per Rule yes

Position of Generators Turbo Alternators P & Sash on Generating platform, Steam Motor Gen on platform below,

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 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

Main Switch Boards, where placed On Gen platform for power & below for lighting

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, incombustible 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 connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework none used, and is the

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, 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 Circuit Breakers

with overload release for each Generator, & for each circuit a 3 way quick

break switch, for lighting Double pole switch & fuse

Instruments on main switchboard 4 ammeters 2 voltmeters 1 synchronising device for paralleling purposes.

" " lighting " 1

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

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

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 3.5 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 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 lighting cables run in troughing under

Support and Protection of Cables, state how the cables are supported and protected cables clipped to bulkheads

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 yes 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

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 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 fibre

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

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 yes in pump

rooms, protected by Stout Glass bowl, how are the cables led in galvanised iron pipe wholly outside pump rooms

where are the controlling switches situated underneath saloon in deck space

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

Arc Lamps, other than searchlight lamps, No. of 1, are their live parts insulated from the frame or case 1, 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, Great motor

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 and

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 On fore & main masts

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 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	2	120 K.W.	220	400	1000	Italian Turbine through bearing		
AUXILIARY	1	10 K.W.	110	91	1440	A.C. Induction motor		
EMERGENCY	1	10 K.W.	110	91	340	Single cylinder steam engine		
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...	3	.3074	34	.103	400	34	paper	L.C.A. Braided
	AUXILIARY GENERATOR	2	.1009	19	.083	91	30	rubber	do
	EMERGENCY GENERATOR	2	.1009	19	.083	91	25	do	do
	ROTARY TRANSFORMER	2	.1009	19	.083	91	25	do	do
	AUXILIARY SWITCHBOARDS	2	.1004	4	.044	16	80	do	do
	ENGINE ROOM	2	.0040	4	.036	8	120	do	do
	BOILER ROOM	2	.0600	19	.064	65	520	do	do
	Saloon & Navigation	2	.0104	4	.044	24.6	65	do	do
	WIRELESS	2	.0221	4	.064	-	540	do	do
	SEARCHLIGHT	2	.0019	3	.029	1.12	410	do	do
	MASTHEAD LIGHT..MAIN	2	.0019	3	.029	1.12	90	do	do
	SIDE LIGHT	2	.0019	3	.029	.78	60	do	do
	COMPASS LIGHTS	2	.0019	3	.029	1.12	620	do	do
	STERN LIGHTS	2	.0019	3	.029	1.12	620	do	do
	CARGO LIGHTS	2	.003	40	.0046	3.36	60	do	Cable Type Flex
	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						3 core		
	MAIN BILGE LINE PUMPS	1	.0040	4	.036	14.3	60	paper	L.C.A. Braided
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	MA. CIRC. SEA WATER PUMPS	2	.1009	19	.083	125	65	do	do
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	1	.0040	4	.036	19	100	do	do
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR	1	.0221	4	.064	52	45	do	do
	WORKSHOP MOTOR								
	VENTILATING FANS								
	Forced Draught Fan	2	.0221	4	.064	40	50	do	do
	Main Bed Pump	1	.0221	4	.064	52	40	do	do
	Main Lighting Set	1	.0221	4	.064	45	30	do	do
	Generator	1	.0040	4	.036	26	30	do	do
	Sea Paval Pump	1	.0040	4	.036	5	50	rubber	L.C.A. Braided
	Reverberator and Septon	2	.0040	4	.036	8.5	100	do	do

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Lloyd's Register Foundation

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.

P.PRO. THE SUNDERLAND FORGE & ENGINEERING CO. LD.
Electrical Engineers.

Date 16th. February 1923.

COMPASSES.

Distance between electric generators or motors and standard compass

265 feet

Distance between electric generators or motors and steering compass

250 feet

The nearest cables to the compasses are as follows:—

A cable carrying 28 Ampères on the feet from standard compass 4 feet from steering compass.

A cable carrying 28 Ampères 4 feet from standard compass on the feet from steering compass.

A cable carrying 6.6 Ampères 14 feet from standard compass 10 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 Each course in the case of the standard compass, and Nil degrees on each course in the case of the steering compass.

JOSEPH L. THOMPSON & SONS, LIMITED,

Builder's Signature.

Date 19th Feb/23.

Is this installation a duplicate of a previous case yes If so, state name of vessel British Lord.

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

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

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

JWD 28/2/23.

Total Capacity of Generators 202 Kilowatts

The amount of Fee ... £ 36 : 11 : 9th Feb 1923

Travelling Expenses (if any) £ : : 2nd Feb 1923

Committee's Minute

Assigned

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