

Rpt. 13.

No. 83127.

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

13 SEP 1928

Date of writing Report

19

When handed in at Local Office

18 SEP 1928

Port of

Received at London Office

NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book.

Newcastle.

Date, First Survey April 4thLast Survey August 7th 1928.

(Number of Visits.....9.....)

66255 on the M. Y. "British Pluck"

Tons { Gross 1100
Net 540

Built at Newcastle.

By whom built Swan Hunter & W. R. Holt

Yard No. 1254 When built 1928

Owners British Tanker Co. Ltd.

Port belonging to Swansea.

Electric Light Installation fitted by J. H. Holmes & Co. Newcastle/Tyne. Contract No. 1254 When fitted 1928
" Power " " " Swan Hunter & Wigham Richardson Co. Ltd.

System of Distribution

Dankle wire

Pressure of supply for Lighting

110.

volts, Heating

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 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 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

—

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 starboard 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

—

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

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 C. B. fitted with overload, reverse current & no volt coils. Double pole switch & fuses on each outgoing circuit

Instruments on main switchboard

two

ammeters

two

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

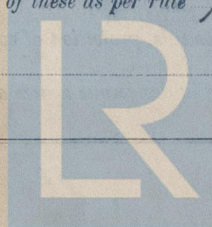
coupled to earth through switches & fuses

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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Foundation

W81-016

Cables: Single, twin, concentric, or multicore single 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 4.0 volts lighting. 5.0 volts power
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 lead covered, arm'd & braided cables in engine room & in galvanised iron pipe along deck fore shaft. lead cov'd & braided cable in cabins.

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 —

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 fitted

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 yes.

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected stout glass bowl protected by metal guard, only to be opened from outside ✓, how are the cables led in galvanised steel pipe ✓

where are the controlling switches situated in bridge acc't passage. ✓

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 axes 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 —, 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 yes

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

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.

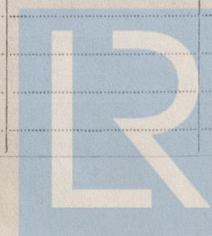
| DESCRIPTION OF GENERATOR. | No. of | RATED AT | | | Revs. per Min. | DRIVEN BY | WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE. | |
|---------------------------|--------|------------|--------|----------|----------------|---------------|--|----------------------|
| | | Kilowatts. | Volts. | Ampères. | | | Fuel Used. | Flash Point of Fuel. |
| MAIN | 1 | 30 | 110 | 272 | 300 | Diesel Engine | | |
| AUXILIARY | 1 | 21 | 110 | 190 | 450 | Steam engine | | |
| 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. Amperes. | Approximate Length. (Lead and Return.) Feet. | Insulated with | HOW PROTECTED. |
|----------|-------------------------|--------------------|--|------------------------|-----------|---------------------------------|--|----------------|------------------------------|
| | | | | No. | Diameter. | | | | |
| | MAIN GENERATOR... | 2 | .4064 | 61 | .093 | 272 | 90 | Y. I. R. | Lead cov'd & arm'd |
| | EQUALISER CONNECTIONS | 1 | .2465 | 37 | .093 | — | 60 | 50 | 50 |
| | AUXILIARY GENERATOR | 2 | .2465 | 37 | .093 | 190 | 72 | 50 | 50 |
| | EMERGENCY GENERATOR | | | | | | | | |
| | ROTARY TRANSFORMER... | | | | | | | | |
| | AUXILIARY SWITCHBOARDS | | | | | | | | |
| | ENGINE ROOM | | | | | | | | |
| | BOILER ROOM | 2 | .01046 | 7 | .044 | 8 | 30 | Y. I. R. | Arm'd lead cov'd & braided |
| | ACCOMMODATION mid shaft | 2 | .01046 | 7 | .044 | 10 | 40 | 50 | 50 |
| | Navigation | 2 | .01046 | 7 | .044 | 8 | 120 | 50 | 50 |
| | Forward | 2 | .00455 | 7 | .029 | 4 | 220 | 50 | 50 |
| | WIRELESS | 2 | .01046 | 7 | .044 | 8 | 90 | 50 | 50 |
| | SEARCHLIGHT | | | | | | | | |
| | MASTHEAD LIGHT... | 2 | .00194 | 3 | .029 | .6 | 175 | 50 | Lead cov'd & braided |
| | SIDE LIGHTS | 2 | .00194 | 3 | .029 | .6 | 30 | 50 | 50 |
| | COMPASS LIGHTS | 2 | .00194 | 3 | .029 | .25 | 15 | 50 | 50 |
| | DECK LIGHTS | 2 | .00194 | 3 | .029 | .6 | 260 | 50 | 50 |
| | CARGO LIGHTS | 2 | .00299 | 3 | .036 | 2.0 | 60 | 50 | Lead cov'd, arm'd & braided. |
| | ARC LAMPS | | | | | | | | |
| | HEATERS | | | | | | | | |

MOTOR CONDUCTORS.

| Ref. No. | DESCRIPTION. | No. of Motors. | Effective Area of each Conductor. Sq. Ins. | COMPOSITION OF STRAND. | | Total Maximum Current. Amperes. | 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 | 1 | .3024 | 37 | .103 | 226 | 120 | Y. I. R. | Lead cov'd & arm'd |
| | FRESH WATER PUMP | | | | | | | | |
| | ENGINE TURNING GEAR | | | | | | | | |
| | ENGINE REVERSING GEAR | | | | | | | | |
| | LUBRICATING OIL PUMPS | 2 | .1478 | 37 | .072 | 120 | 150 | 50 | 50 |
| | OIL FUEL TRANSFER PUMP | | | | | | | | |
| | WINDLASS | | | | | | | | |
| | WINCHES, FORWARD | | | | | | | | |
| | WINCHES, AFT | | | | | | | | |
| | STEERING GEAR | | | | | | | | |
| | (a) MOTOR GENERATOR | | | | | | | | |
| | (b) MAIN MOTOR | | | | | | | | |
| | WORKSHOP MOTOR | | | | | | | | |
| | VENTILATING FANS | | | | | | | | |
| | Turning Motor | 1 | .02214 | 7 | .064 | 42 | 200 | 50 | 50 |
| | Oil Purifiers | 2 | .01046 | 7 | .044 | 9 | 140 | 50 | 50 |
| | O. B. Blower | 1 | .01046 | 7 | .044 | 18 | 120 | 50 | 50 |
| | O. F. Heater | 1 | .00299 | 3 | .036 | 9 | 30 | 50 | 50 |



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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 J. H. HOLMES & CO. Electrical Engineers. Date 11. 9. 28
SWAN, HUNTER & WIGHAM RICHARDSON, LTD. *P. Robinson*
Chamorgan for power *for lighting*

COMPASSES.

Distance between electric generators or motors and standard compass 60 feet.
Distance between electric generators or motors and steering compass 55 feet.
The nearest cables to the compasses are as follows:—
A cable carrying .25 Amperes on the feet from standard compass 7 feet from steering compass.
A cable carrying .25 Amperes 7 feet from standard compass on the feet from steering compass.
A cable carrying Amperes 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 each course in the case of the standard compass, and nil degrees on each course in the case of the steering compass.

FOR SWAN, HUNTER & WIGHAM RICHARDSON, LTD.
G. J. Tweney Builder's Signature. Date 17 Sept. 1928
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.)

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

It is submitted that this vessel is eligible for THE RECORD. Elec. Light.
J. H. 20/9/28.

Total Capacity of Generators 51. Kilowatts.

The amount of Fee ... £ 27:12 : 15.8. 1928
When applied for,
Travelling Expenses (if any) £ : : 17.8. 1928
When received,

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

Committee's Minute

Assigned *Elec Light*

Im. 228.—Transfer.
(The Surveys are requested not to write on or below the space for Committee's Minute.)