

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

31 JUL 1928

Received at London Office

Date of writing Report 19 When handed in at Local Office 30 JULY 1928 Port of

SUNDERLAND.

No. in Survey held at SUNDERLAND. Date, First Survey Apr 10 Last Survey May 15 1928
Reg. Book. (Number of Visits 5)

73953 on the M.V. "INNESMOOR"

Tons { Gross 4392
Net 2649

Built at Sunderland By whom built W. D. & C. Ltd. Yard No. 592. When built 1928.

Owners Messrs. Hine Ltd. Port belonging to London.

Electric Light Installation fitted by Messrs. Campbell & Co. Ltd. Contract No. 592. When fitted 1928.

System of Distribution Double 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 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 No, is an adjustable regulating resistance fitted in series with each shunt field No.

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 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 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 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 — 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.

insulated from the slab with mica or micanite and the slab similarly insulated from its framework Yes, 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.

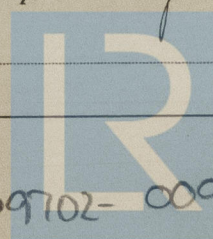
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches. Double pole circuit breaker on dynamos. Single pole change over switch & double pole fuses on each outgoing circuit.

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.

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



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Insulation of Cables, state type of cables, single or twin both 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 4.0 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
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, radiators 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 head covered & armoured in engine room. V.I.R. cables in conduit through holds & cargo spaces. lead covered cables in access
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 —
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 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, 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
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 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 —, 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 —
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 | 12.5 | 110 | 114 | 400 | Steam engines. | | | |
| AUXILIARY ... | | | | | | | | | |
| 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 | 10.09 | 19 | .082 | 114 | 16 | V.I.R. | lead covered & armoured. |
| | AUXILIARY GENERATOR | | | | | | | | |
| | EMERGENCY GENERATOR | | | | | | | | |
| | ROTARY TRANSFORMER... | | | | | | | | |
| | AUXILIARY SWITCHBOARDS | | | | | | | | |
| | ENGINE ROOM | | | | | | | | |
| | BOILER ROOM | 2 | .00401 | 4 | .036 | 16 | 40 | Bo. | lead covered & armoured. |
| | Accom. Amidships | 2 | .01046 | 4 | .044 | 25 | 200 | Bo. | in screwed pipe |
| | do. Aft | 2 | .00401 | 4 | .036 | 15 | 100 | Bo. | Bo. |
| | Navigation. | 2 | .00401 | 4 | .036 | 8.0 | 250 | Bo. | lead covered. |
| | WIRELESS | 2 | .01046 | 4 | .044 | 15.0 | 240 | Bo. | lead covered & armoured. |
| | SEARCHLIGHT | | | | | | | | |
| | MASTHEAD LIGHT... | 2 | .00194 | 3 | .029 | 6 | 200 | Bo. | in screwed pipe |
| | SIDE LIGHTS... | 2 | .00194 | 3 | .029 | 6 | 60 | Bo. | Bo. |
| | COMPASS LIGHTS... | 2 | .00194 | 3 | .029 | 25 | 30 | Bo. | Bo. |
| | STEER LIGHTS | 2 | .00194 | 3 | .029 | 6 | 260 | Bo. | Bo. |
| | CARGO LIGHTS | 2 | .0017 | 16 | .012 | 2.0 | 120 | Bo. | bat type flexible. |
| | 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 | | | | | | | | |
| | Frame (2 H.P.) | 1 | .00401 | 4 | .036 | 11.4 | 120 | V.I.R. | lead covered & armoured. |
| | Washshop (2 H.P.) | 1 | .00401 | 4 | .036 | 11.4 | 120 | Bo. | Bo. |
| | Brusher No. 1 (2 H.P.) | 1 | .00701 | 4 | .036 | 11.4 | 106 | Bo. | Bo. |
| | Bo. No. 2 (2 H.P.) | 1 | .00401 | 4 | .036 | 11.4 | 120 | Bo. | Bo. |

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.

CAMPBELL & THERWELL

Thomas Meady

Electrical Engineers.

Date 24th July 1928

COMPASSES.

Distance between electric generators or motors and standard compass 84 feet.

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying 25 Amperes on the feet from standard compass 10 feet from steering compass.

A cable carrying 25 Amperes 10 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 all course in the case of the standard compass, and nil degrees on all course in the case of the steering compass.

WILLIAM DOXFORD & SONS, Limited,

W. Maxwell

Builder's Signature.

Date 25-7-28

Is this installation a duplicate of a previous case yes. If so, state name of vessel m/s. Lymmer.

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.

W.T. Badger
9/8/28

Total Capacity of Generators 25 Kilowatts

The amount of Fee ... £ 20:

When applied for,

19 May 1928

When received,

23 May 1928

Travelling Expenses (if any) £ :

W.T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Elec. Light

5c, 12, 13.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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