

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 1 NOV 1949

Date of writing Report 10. 8. 1949. When handed in at Local Office 31 OCT 1949. Port of Grimsby  
 No. in Survey held at Immingham Date, First Survey 24. 6. 49. Last Survey 5. 8. 1949.  
 Reg. Book. (No. of Visits 3.)  
 30933 on the S.S. "WILLIAM HOWARD" Tons { Gross 1793  
 Net 995  
 Built at Sturgeon Bay By whom built Leathen D Smith & Co. Yard No. When built 1943  
 Owners Ministry of Transport on bareboat charter from U.S.M.C. Port belonging to London  
 Installation fitted by - When fitted 1943  
 Is vessel equipped for carrying Petroleum in bulk. No. Is vessel equipped with D.F. Yes. E.S.D. Yes. Gy.C. No. Sub.Sig. No. Radar -

Plans, have they been submitted and approved. No. System of Distribution two wire Voltage of Lighting 110

Heating Power 110 D.C. or A.C., Lighting DC Power DC If A.C. state frequency -

Prime Movers, has the governing been found as per Rule when full load is thrown on and off. Yes. Are turbine emergency governors fitted with a trip switch. -

Generators, are they compound wound. Yes, and level compounded under working conditions. Yes, if not compound wound state distance between generators. - and from switchboard. - Are the generators arranged to run in parallel. Yes, are shunt field regulators provided. Yes. Is the compound winding connected to the negative or positive pole negative. - Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing. - Have certificates of test for machines under 100 kw. been supplied. No. and the results found as per Rule. -

Position of Generators. Engine room starboard on platform

is the ventilation in way of generators satisfactory. Yes. are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil. Yes. Switchboards, where are main switchboards placed. on angle frame NEAR generators.

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil. Yes, what insulation is used for the panels. "Sindanyo", if of synthetic insulating material is it an Approved Type. Yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule. - Is the construction as per Rule, including locking of screws and nuts. Yes. Description of Main Switchgear for each generator and arrangement of equaliser switches. A double pole, air break circuit breaker with O/L & R/V current trips and separate linked equalising switch.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. a double pole knife switch and double pole fuse.

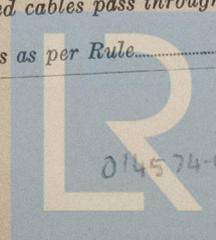
Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. Yes. Instruments on main switchboard. two ammeters. 3 voltmeters. - synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection. Yes. Earth Testing, state means provided. E. lamps coupled to E. through switches and fuses.

Switches, Circuit Breakers and Fuses, are they as per Rule. Yes, are the fuses an Approved Type. Yes, make of fuses. - are all fuses labelled. - If circuit breakers are provided for the generators, at what overload do they operate. 10, and at what current do the reversed current protective devices operate. Yes.

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule. Yes

Cables, are they insulated and protected as per Rule. to A.I.E.E. Standards, if otherwise than as per Rule are they of an Approved Type. Yes, state maximum fall of pressure between bus bars and any point under maximum load. - are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets. Yes. Are all paper insulated and varnished cambric insulated cables sealed at the ends. Yes. Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage. Yes, are any cables laid under machines or floorplates. No, if so, are they adequately protected. - Are cables in machinery spaces, galleys, laundries, etc., lead covered. Yes or run in conduit or of the "HR" type. - State how the cables are supported or protected. Main feeders run on solid metal trough in forward and aft bunkers. In accommodation cables on open hangers supported from deck beams.

Are all lead sheaths, armouring and conduits effectually bonded and earthed. Yes. Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands. Yes, where unarmoured cables pass through beams, etc., are the holes effectually bushed. Yes. Refrigerated chambers, are the cables and fittings as per Rule. -



© 2021

Lloyd's Register Foundation

014574-014581-031612

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. Emergency Supply, state position Yes.

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches and fuses Yes. Are the switches and fuses in a position accessible only to the officers on watch Yes, is an automatic indicator fitted Yes. Is an alternative supply provided Yes.

Secondary Batteries, are they constructed and fitted as per Rule -, are they adequately ventilated -. state battery capacity in ampere hours -.

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes. Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present No, if so, how are they protected -.

and where are the controlling switches fitted -. Are all fittings suitably ventilated Yes.

Searchlight Lamps, No. of -, whether fixed or portable -, are they of the carbon arc or of the filament type -.

Heating and Cooking, is the general construction as per Rule -, are the frames effectually earthed -, are heaters in the accommodation of the convection type -. Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil Yes.

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment -. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing -.

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule -.

Control Gear and Resistances, are they constructed and fitted as per Rule Yes. Lightning Conductors, where required are they fitted as per Rule -. Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with -, are all fuses of an Approved Cartridge Type -, make of fuse -. Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships -. Are the cables lead covered as per Rule -.

E.S.D., if fitted state maker -, location of transmitter - and receiver -.

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations Yes.

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory Yes.

PARTICULARS OF GENERATING PLANT.

| DESCRIPTION OF GENERATOR.    | No. of | MAKER. | RATED AT                 |        |          |                | PRIME MOVER.  |        |
|------------------------------|--------|--------|--------------------------|--------|----------|----------------|---------------|--------|
|                              |        |        | Kilowatts per Generator. | Volts. | Ampères. | Revs. per Min. | TYPE.         | MAKER. |
| MAIN ...                     | 2      | -      | 26 1/2                   | 110    | 245      | 500            | Steam Engines | -      |
| EMERGENCY ROTARY TRANSFORMER |        |        |                          |        |          |                |               |        |

GENERATOR CABLES.

| DESCRIPTION.              | KILOWATTS. | CONDUCTORS.               |  | MAXIMUM CURRENT IN AMPERES. |       | APPROX. LENGTH (lead plus return feet). | INSULATION. | PROTECTIVE COVERING. |
|---------------------------|------------|---------------------------|--|-----------------------------|-------|---|-------------|----------------------|
|                           |            | No. in Parallel per Pole. | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit.             | Rule. |   |             |                      |
| MAIN GENERATOR ...        | 26 1/2     | 1                         | 37/.072  | 245                         | 246   | 60                                      | V.C.        | L.C. B.W.A.          |
| " " EQUALISER ...         | 26 1/2     | 1                         | 37/.072  | 245                         | 246   | 30                                      | V.C.        | L.C. B.W.A.          |
|                           |            | 2                         | 37/.072  | 245                         | 246   | 48                                      | "           | " "                  |
|                           |            | 1                         | 37/.072  | 245                         | 246   | 24                                      | "           | " "                  |
| EMERGENCY GENERATOR       |            |                           |  |                             |       |   |             |                      |
| ROTARY TRANSFORMER: MOTOR |            |                           |  |                             |       |   |             |                      |
| " " GENERATOR             |            |                           |  |                             |       |   |             |                      |

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

| DESCRIPTION.                    | No. in Parallel per Pole. | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit. | Rule. | APPROX. LENGTH (lead plus return feet). | INSULATION. | PROTECTIVE COVERING. |
|---------------------------------|---------------------------|--|-----------------|-------|---|-------------|----------------------|
| Deck lighting section panel "B" | 1                         | 7/.064   | 17              | 75    | 240                                     | V.C.        | L.C. B.W.A.          |
| Bridge Deck " " "C"             | 1                         | 7/.064   | 32              | 75    | 135                                     | "           | " "                  |
| Engine room " " "D"             | 1                         | 7/.064   | 48              | 75    | 40                                      | "           | " "                  |
| Aft " " "E"                     | 1                         | 7/.052   | 17              | 57    | 265                                     | "           | " "                  |

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

| DESCRIPTION.            | CONDUCTORS.   |  | MAXIMUM CURRENT IN AMPERES. |       | APPROX. LENGTH (lead plus return feet). | INSULATION. | PROTECTIVE COVERING. |
|-------------------------|---|--|-----------------------------|-------|---|-------------|----------------------|
|                         | No. in Parallel per Pole.                           | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit.             | Rule. |   |             |                      |
| Wireless                | 1   | 7/.064   | 30                          | 75    | 125                                     | V.C.        | L.C. B.W.A.          |
| Navigation lights       | 1   | 7/.029   | 5                           | 15    | 240                                     | "           | " "                  |
| Lighting & Heating      | Alternative supply from Bridge to R. Section Panel. |  |                             |       |   |             |                      |
| Aft Deck lighting plugs | 1   | 7/.029   | 5                           | 15    | 240                                     | V.C.        | L.C. B.W.A.          |
| Forward " "             | 1   | 7/.029   | 8                           | 15    | 280                                     | "           | " "                  |
| Floodlights panel       | 1   | 7/.052   | 20                          | 57    | 150                                     | "           | " "                  |
| D.G. supply             | 1   | 7/.064   | 62                          | 75    | 25                                      | "           | " "                  |

MOTOR CABLES.

| ALL IMPORTANT MOTORS TO BE ENUMERATED. | No. | B.H.P. | No. in Parallel per Pole. | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit. | Rule. | APPROX. LENGTH (lead plus return feet). | INSULATION. | PROTECTIVE COVERING. |
|--|-----|--------|---------------------------|--|-----------------|-------|---|-------------|----------------------|
| Main Circulating Pump                  | 1   | 25     | 1                         | 37/.064  | 190             | 210   | 90                                      | V.C.        | L.C. B.W.A.          |
| Refrigerating Motor                    | 1   | 1 1/2  | 1                         | 7/.029   | 15              | 15    | 100                                     | "           | " "                  |

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.  
 All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.  
 The foregoing is a correct description.

..... Electrical Contractors. Date.....

**COMPASSES.**

Have the compasses been adjusted under working conditions.....

..... Builder's Signature. Date.....

Have the foregoing descriptions and schedules been verified and found correct.....  
 is Design N.3.3.R1 Cargo Vessels U.S.A.  
 Is this installation a duplicate of a previous case..... If so, state name of vessel.....

Plans. Are approved plans forwarded herewith  No  If not, state date of approval.....

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith.....  No

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.).....  
 The Electrical equipment of this vessel has been examined, tested and found to comply in general principle with the Society's "Rules for Electrical Equipment". No plans are available but the installation was found to be similar in circuit detail to the plans of the "Samuel Very" forwarded by The Secretary for use in this Survey. The cables are to the standards of the R.I.E.E. and of adequate current carrying capacity for their several duties. The generators and motors were satisfactorily operated on load and the insulation resistance of all the circuits was found good. This equipment as now seen is in my opinion suitable for a vessel bearing the Society's Class.

*Noted.  
 21 12.49.  
 95.*

Total Capacity of Generators..... 52 1/2 ..... Kilowatts.

|                                |            |                   |    |
|--------------------------------|------------|-------------------|----|
| The amount of Fee ... .. £     | See Rpt. 9 | When applied for, | 19 |
| Travelling Expenses (if any) £ | :          | When received,    | 19 |

*W. G. Cornell*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... FRL 30 DEC 1949

Assigned..... *See minute on file.*

2m. 9.46.—Transfer. (MADE AND PRINTED IN ENGLAND.)  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

