

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

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Date of writing Report 18 March, 1949 When handed in at Local Office 19 April, 1949 Port of Baltimore, Maryland

No. in Survey held at Sparrows Point, Maryland Date, First Survey 5th January Last Survey 10th March 1949
Reg. Book. (No. of Visits 7)

on the S.S. "WORLD PEACE" Tons Gross 10892 Net 6539

Built at Sparrows Point, Maryland By whom built Bethlehem Sparrows Point Shipyard Inc. Yard No. 4466 When built 1949

Owners World Tankers Corp. Port belonging to Monrovia, Liberia.

Installation fitted by Bethlehem Sparrows Point Shipyard Inc., When fitted 1949

Is vessel equipped for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. No Radar Yes

Plans, have they been submitted and approved Yes System of Distribution 2-Wire D.C. Voltage of Lighting 115 D.C.

Heating - Power 230 D.C. or A.C., Lighting 115 D.C. Power - If A.C. state frequency -

Prime Movers, has the governing been found as per Rule when full load is thrown on and off A.I.E.E. Are turbine emergency governors fitted with a trip switch Yes Generators, are they compound wound Shunt, and level compounded under working conditions -

if not compound wound state distance between generators 15ft. and from switchboard 32' AFT. 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

Half on each one Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing A.B.S. Have certificates of test for machines under 100 kw. been supplied - and the results found as per Rule A.I.E.E. STDS.

Position of Generators Port Side of engine room on 23'-9" Flat

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 Outboard of Generators on same flat.

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 1 1/2" Thick Ebony Asbestos, 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 A.I.E.E. Is the construction as per Rule, including locking of screws and nuts A.I.E.E. Description of Main Switchgear for each generator and arrangement of equaliser switches One 1600amp. 2 Pole Air Circuit Breaker with Dual Mechanical over current trip, one overload attachments per pole, reverse current and undervoltage trips and one 1600 amp. D.P.S.T. Disconnect Switch

and the switch and fuse gear (or circuit breakers) for each outgoing circuit 2 Pole Air Circuit Breakers with Dual Mechanical over current trip and one overload attachment per pole (above 200amp.) and 2 Pole Fused Knife Switches (200amp. and below)

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 2

ammeters 4 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 - Earth Testing, state means provided 2

Ground Detector Lamps with normally open switch in ground lead

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes

make of fuses Chase-Shawmut, are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 1580 amps., and at what current do the reversed current protective devices operate 160 amps.

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule A.I.E.E. STDS.

Cables, are they insulated and protected as per Rule A.I.E.E., 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 2.7% are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets Solderless Lugs 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 Yes, if so, are they adequately protected Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit No

or of the "HR" type - State how the cables are supported or protected In galvanized steel strap hangers spaced not more than 18" where vertical and 14" where horizontal cables on gangway are run in galvanized steel pipe fitted with 1/2" drain holes at 5ft. intervals

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 effectively bushed All cables armored Refrigerated chambers, are the cables and fittings as per Rule A.I.E.E. STDS.

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

Auxiliary diesel generator - aft of boilers on 20' 9" boiler flat

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 No

Secondary Batteries, are they constructed and fitted as per Rule None, are they adequately ventilated - state battery capacity in ampere hours None

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 Yes if so, how are they protected Explosion Proof fixtures

and where are the controlling switches fitted Outside such spaces Are all fittings suitably ventilated Yes

Searchlight Lamps, No. of 1, whether fixed or portable fixed, are they of the carbon arc or of the filament type Filament

Heating and Cooking, is the general construction as per Rule A.I.E.E., are the frames effectually earthed Yes, are heaters in the accommodation of the convection type None 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 Yes Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing A.E.S.

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

Control Gear and Resistances, are they constructed and fitted as per Rule A.I.E.E. Lightning Conductors, where required are they fitted as per Rule A.I.E.E. 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 Yes, are all fuses of an Approved Cartridge Type Yes, make of fuse Chase-Shawmut Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships Yes Are the cables lead covered as per Rule Yes

E.S.D., if fitted state maker Submarine Co., location of transmitter innerbottom and receiver Same

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. | Amps. | Revs. per Min. | TYPE. | MAKER. |
| MAIN | 2 | General Electric | 300 | 240 D.C | 1250 | 1200 | Turbine | General Electric |
| Auxiliary EMERGENCY | 1 | Electro Dynamic | 60 | 240 D.C | 250 | 1500 | Diesel | Cummins |
| ROBARY TRANSFORMER | 2 | " | 35 | 120 D.C | 292 | 1700 | Motor | Electro Dynamic |

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 A.I.E.E. | | | |
| MAIN GENERATOR | 300 | 3 | 500MCM | 1562 | 1587 | 64' | V.C | Lead & Basket Weave Armoured |
| " " EQUALISER | | | | | | | | |
| Auxiliary EMERGENCY GENERATOR | 60 | 1 | 300MCM | 312 | 376 | 280' | V.C | " |
| ROBARY TRANSFORMER: MOTOR | 60 H.P | 1 | 212MCM | 269 | 299 | 100' | V.C | " |
| " " GENERATOR | 35 | 1 | 300MCM | 365 | 376 | 100' | V.C | " |

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 A.I.E.E. | APPROX. LENGTH (lead plus return feet). | INSULATION. | PROTECTIVE COVERING. |
|---------------------|---------------------------|--|-----------------|---------------|---|-------------|------------------------------|
| Midship power panel | 1 | 66,400CM | 57 | 99 | 730' | V.C | Lead & Basket Weave Armoured |
| After power panel | 1 | 41,700CM | 43 | 75 | 240' | V.C | " |
| Machine shop panel | 1 | 10,400CM | 20 | 30 | 210' | V.C | " |

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 A.I.E.E. | | | |
| Navigation Lights | 1 | 16,500CM | 4 | 41 | 720' | V.C | Lead & Basket Weave Armour |
| Fore-castle Lights | 1 | 106,000CM | 38 | 188 | 960' | " | " |
| Engine Room Lighting | 1 | 41,700CM | 53 | 75 | 60' | " | " |
| Boiler Room Lighting | 1 | 41,700CM | 45 | 75 | 120' | " | " |
| After Quarters Lighting | 1 | 212,000CM | 112 | 299 | 100' | " | " |
| Midship Quarters Lighting | 1 | 500,000CM | 100 | 529 | 650' | " | " |
| Pump Room Lights | 1 | 6,530CM | 8 | 22 | 230' | " | " |
| Cargo Circuit Lights | 1 | 41,700CM | 15 | 75 | 620' | " | " |
| Echo Depth Sounder | 1 | 16,500CM | 5 | 41 | 750' | " | " |
| Radio | 1 | 10,400CM | 15 | 41 | 630' | " | " |
| Gyro Compass | 1 | 10,400CM | 8 | 30 | 750' | " | " |
| Galley Range (12K.W.) | 1 | 41,700CM | 53 | 75 | 236' | " | " |
| D.C.I.C. Systems Feeder | 1 | 6,530CM | 3 | 22 | 60' | " | " |
| A.C. " " " | 1 | 6,530CM | 2 | 22 | 40' | " | " |
| Radar | 1 | 10,400CM | 8 | 30 | 120' | " | " |

MOTOR CABLES.

| ALL IMPORTANT MOTORS TO BE ENUMERATED. | No. | B.H.P. | 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 A.I.E.E. | | | |
| Main Cargo Pumps | 2 | 250 | 3 | 300,000CM | 1100 | 1128 | 170' | V.C. | Lead & Basket Weave Armour |
| Main Circulator | 1 | 75 | 1 | 300,000CM | 338 | 376 | 100' | " | " |
| Aux. Circulator | 1 | 10 | 1 | 26,300CM | 47 | 55.5 | 100' | " | " |
| Forced Draft Fans | 2 | 25 | 1 | 106,000CM | 125 | 188 | 260' | " | " |
| Lube Oil Service Pump | 1 | 25 | 1 | 106,000CM | 125 | 188 | 210' | " | " |
| Main Condensate Pumps | 2 | 18 | 1 | 66,400CM | 84 | 99 | 150' | " | " |
| Aux. " " | 1 | 7.5 | 1 | 16,500CM | 36 | 41 | 100' | " | " |
| General Service Pump | 1 | 10 | 1 | 26,300CM | 47 | 55.5 | 180' | " | " |
| Fuel Oil Service Pumps | 2 | 7.5 | 1 | 16,500CM | 36 | 41 | 220' | " | " |
| Sanitary Pump | 1 | 7.5 | 1 | 16,500CM | 36 | 41 | 190' | " | " |
| Main Air Compressor | 1 | 15 | 1 | 41,700CM | 58 | 75 | 300' | " | " |
| Aux. Air Compressor | 1 | 3 | 1 | 6,530CM | 15 | 22 | 240' | " | " |
| Refrigeration Compressor | 1 | 7.5 | 1 | 16,500CM | 36 | 41 | 250' | " | " |
| Turning Gear | 1 | 7.5 | 1 | 16,500CM | 36 | 41 | 130' | " | " |
| Lube Oil Purifier | 1 | 2 | 1 | 10,400CM | 10.4 | 30 | 220' | " | " |
| Pump Room Vent Fan | 1 | 1.25 | 1 | 6,530CM | 6.2 | 22 | 190' | " | " |
| Drinking Water Pump | 1 | 1 | 1 | 6,530CM | 5.3 | 22 | 270' | " | " |
| Wash Water Pump | 1 | 1 | 1 | 6,530CM | 5.3 | 22 | 180' | " | " |
| Steering Gear Pump | 2 | 30 | 1 | 106,000CM | 146 | 188 | 340' | " | " |
| Gyro Pilot Drive | 1 | - | 1 | 6,530CM | 8 | 22 | 70' | " | " |
| Lathe | 1 | 2 | 1 | 6,530CM | 10 | 22 | 180' | " | " |
| Drill Press | 1 | 1 | 1 | 6,530CM | 5 | 22 | 80' | " | " |
| Grinder | 1 | 2 | 1 | 6,530CM | 10 | 22 | 40' | " | " |
| I.C. Rotary Converters | 2 | 1.5kVA | 1 | 6,530CM | 10.4 | 22 | 90' | " | " |
| Drinking Water Pump (Midship) | 1 | 1.5 | 1 | 6,530CM | 8.6 | 22 | 110' | " | " |
| Gland Exhauster Fan | 1 | .75 | 1 | 6,530CM | 4.1 | 22 | 180' | " | " |
| Vent Fan (Midship) | 1 | 1.625 | 1 | 6,530CM | 6.5 | 22 | 106' | " | " |
| " " " | 1 | 1.5 | 1 | 6,530CM | 7.8 | 22 | 102' | " | " |
| " " (After Quarters) | 1 | 1.5 | 1 | 6,530CM | 7.8 | 22 | 162' | " | " |
| " " " " | 1 | .875 | 1 | 6,530CM | 4.9 | 22 | 186' | " | " |
| " " " " | 1 | 1.25 | 1 | 6,530CM | 6.2 | 22 | 108' | " | " |
| " " " " | 1 | .625 | 1 | 6,530CM | 4.9 | 22 | 162' | " | " |
| " " " " | 1 | .625 | 1 | 6,530CM | 3.4 | 22 | 210' | " | " |
| " " " " | 1 | .75 | 1 | 6,530CM | 3.4 | 22 | 190' | " | " |

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..... Yes

Is this installation a duplicate of a previous case No If so, state name of vessel No

Plans. Are approved plans forwarded herewith Yes 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.).....

Classification:- The generators and motors were built under special survey in accordance with the American Bureau of Shipping, ^{Rules.} The electrical installation has been carried out under the supervision of the undersigned surveyor and in accordance with the rules of this Society. The dimensions in the report have been taken from the approved plan and checked on the ship and found correct. The material and workmanship is good, the installation examined under working conditions and found satisfactory.

The engine speed governors, overspeed, reverse and overcurrent trips tested satisfactorily and when generators were paralld the load sharing found satisfactory and in accordance with Section 21 of the Rules For Electrical Equipment.

The spare gear conforms to Section 22.

It is the opinion of the undersigned that the electrical installation is eligible to be classed with this Society with the record of LMC 3.49

Noted sent 27/5/49

Total Capacity of Generators 660 ✓ Kilowatts.

| | | | |
|---------------------------------------|-----------|---|-------------------|
| Arranged | | | |
| The amount of Fee ... | £\$350.00 | : | When applied for, |
| | | | 20 April, 19 49 |
| | | | When received, |
| Travelling Expenses (if any) £\$21.00 | | : | - 19 |

C. H. Haman
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute.....

Assigned *Elce light.*

NEW YORK APR 27 1949

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