

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

27 NOV 1942

Date of writing Report.....19..... When handed in at Local Office.....19..... Port of Portland, Maine (New York) U.S.A.No. in Survey held at So. Portland, Maine Date, First Survey 30th April Last Survey 12th August 1942
Reg. Book. (Number of Visits) Continuouson the s.s. "OCEAN MERCHANT" Tons { Gross 7178.42
Net 4280Built at So. Portland, Maine By whom built Todd-Bath Iron S.B. Corp. Yard No. 16 When built 1942Owners British Ministry of War Transport. Port belonging to LondonElectrical Installation fitted by Todd-Bath Iron Shipbuilding Corporation Contract No. 16 When fitted 1942Is vessel fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. yes E.S.D. yes Gy.C. no Sub.Sig. xHave plans been submitted and approved yes System of Distribution 2 Wire D.B. Voltage of supply for Lighting 110 V.Heating None Power None Direct or Alternating Current, Lighting D.C. Power x If Alternating Current state periodicity x Prime Movers,has the governing been tested and found as per Rule when full load is suddenly thrown on and off yes Are turbine emergency governors fitted with a trip switch as per Rule x Generators, are they compound wound yes, are they level compounded under working conditions yesif not compound wound state distance between generators x and from switchboard x Where more than one generator is fitted are theyarranged to run in parallel no, are shunt field regulators provided yes Is the compound winding connected to the negative or positive poleHave machines over 100 kw. been inspected by the Surveyors during manufacture and testing none Have certificates oftest for machines under 100 kw. been supplied x and the results found as per rule x Are the lubricating arrangements and the constructionof the generators as per rule yes Position of Generators Star E.R. Lower Platform.is the ventilation in way of generators satisfactory yes are they clear of inflammable material yes, if situatednear unprotected combustible material state distance from same horizontally x and vertically 7 ft., are the generators protected from mechanicalinjury and damage from water, steam and oil yes, are the bedplates and frames earthed yes and the prime movers and generators in metalliccontact yes Switchboards, where are main switchboards placed Star E. R. Lower Platform.are they in accessible positions, free from inflammable gases and acid fumes yes, are they protected from mechanical injury and damage from water, steamand oil yes, if situated near unprotected combustible material state distance from same horizontally x and vertically 7 ft., what insulationmaterial is used for the panels Ebony Asbestos, if of synthetic insulating material is it an Approved Type yes, if ofsemi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule x Is the frame effectually earthed yesIs the construction as per Rule yes, including accessibility of parts yes, absence of fuses on the back of the board yes, individual fusesto pilot and earth lamps, voltmeters, etc., yes locking of screws and nuts yes, labelling of apparatus and fuses yes, fuses on the "dead"side of switches yes Description of Main Switchgear for each generator and arrangement of equaliser switchesDouble Pole Switches & Double Pole Fuses.and for each outgoing circuit D. P. Switches and Fuses.Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 2ammeters 2 voltmeters x synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to theequaliser connection x Earth Testing, state means provided Earth Lamp and Voltmeters.Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an approved type yes, are all fuses labelled asper Rule yes If circuit breakers are provided for the generators, at what overload current did they open when tested x, are the reversed currentprotection devices connected on the pole opposite to the equaliser connection x, have they been tested under working conditions, and at what currentdid they operate x Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule yesCables, are they insulated and protected as per the appropriate Tables of the Rules yes, if otherwise than as per Rule are they of an approved type sstate maximum fall of pressure between bus bars and any point under maximum load 2.8 V, are the ends of all cables having a sectional area of 0.04square inch and above provided with soldering sockets yes Are paper insulated and varnished cambric insulated cables sealed at the ends none

with insulating compound.....**x**..... or waterproof insulating tape.....**x**..... 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 cables laid under machines or floorplates.....**no**....., if so, are they adequately protected.....**x**..... Are cables in machinery spaces, galleys, laundries, etc., lead covered.....**yes**..... or run in conduit.....**x**..... State how the cables are supported and protected Steel hangers and clips, Open Ducts or led through pipes or steel casings where protection is necessary.

Are all lead sheaths, armouring and conduits effectually bonded and earthed.....yes..... Refrigerated chambers, are the cables and fittings as per Rule.....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.....yes..... and with what material.....All cables armoured..... Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule.....yes..... Emergency Supply, state position.....none..... and method of control.....X.....

Navigation Lamps, are they separately wired.....**yes**..... controlled by separate double pole switches.....**yes**..... 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**..... Secondary Batteries, are they constructed and fitted as per Rule.....**none**....., are they adequately ventilated.....**x**..... what is the battery capacity in ampere hours.....**x**.....

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof.....**yes**. Are 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.....

and where are the controlling switches fitted in stokehold are all fittings suitably ventilated yes
are all fittings and accessories constructed and installed as per Rule yes Searchlight Lamps, No. of none whether fixed or portable x

....., are their fittings as per Rule. **X** Heating and Cooking, is the general construction as per Rule. **X**.....,

are the frames effectually earthed.....**X**....., are heaters in the accommodation of the convection type.....**X**..... **Motors**, are all motors constructed and installed as per Rule **Yes**..... and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil.....**Yes**....., if situated near unprotected combustible material state minimum distance from same horizontally.....**X**..... and vertically.....**X**..... Are motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment.....**none**.....

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing.....**X**..... Have certificates of test for motors under

100 BHP intended for essential services been supplied and the results found as per Rule.....**X**..... Control Gear and Resistances, are they constructed and fitted as per Rule.....**X**..... Lightning Conductors, where required are they fitted as per Rule.....**X**..... 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.....**x**....., are all fuses of the cartridge type.....**x**.....
are they of an approved type.....**x**..... Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such
ships.....**x**..... Are the cables lead covered as per Rule.....**x**..... Spare Gear, if the vessel is for open sea service have spares been provided as per
Rule.....**yes**..... are they 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	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	15	110	136	450	Steam Engine	x	
EMERGENCY ...	none							
ROTARY TRANSFORMER	none							

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA- TED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.					
				In the Circuit.	Rule.			
MAIN GENERATOR	15 each	1	168000	136.	139.	40'	V.I.R.	L.C.A.
" " EQUALISER								
EMERGENCY GENERATOR	X							
ROTARY TRANSFORMER: MOTOR	X							
" " GENERATOR	X							

MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

[illegible]

MOTOR CABLES.

[illegible]

15-

...*Electrical Engineers.*

Date 29 SEPT 42

Minimum distance between electric generators or motors and standard compass, 10 feet (Wireless Transformer)

6 feet.

Minimum distance between electric generators or motors and steering compass.

The nearest cables to the compasses are as follows:—

A cable carrying 2.15 Amperes 10 feet from standard compass 6 feet from steering compass.

A cable carrying 43 Amperes 3 feet from standard compass 3 feet from steering compass.

A cable carrying .43 Amperes 3 feet from standard compass 3 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 1.5 degrees on North West course in the case of the

standard compass, and 1 degrees on North West course in the case of the steering compass.

EXEC VICE PRESID
TODD BATH IRON SHIPBUILDING CORP

Is this installation a duplicate of a previous case yes If so, state name of vessel "OCEAN LIBERTY", "OCEAN FREEDOM", etc.

Plans. Are approved plans forwarded herewith no If not, state date of approval, 5th May, 1941.

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The Electrical Installation of this vessel has been fitted in accordance with the Rules and approved plans. The materials and workmanship are good and the whole has been tested as required by the Rules with good results.

Noted
LH
2/12/42

Total Capacity of Generators.....30.....Kilowatts.

The amount of Fee \$ 65.16

When applied for,

.....19.....

Travelling Expenses (if any) £

When received.

.....19.....

Committee's Minute

NEW YORK OCT 7 1942

Assigned

Elec. light

Surveyor So Lloyd's Register of Shipping