

10 MAR 1948

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Report No. 6-3 48 When handed in at Local Office 19 Port of SWANSEA Received at London Office 19

Survey held at SWANSEA Date, First Survey 20-2-48 Last Survey 26-2-1948  
 Book. SUPPLY: on the S.S. IVYBANK (Number of Visits 3)

BALTIMORE MD. By whom built BETHLEHEM FAIRFIELD SHIPYARD Tons { Gross 7256  
BANK LINE LTD Port No. 1943 Net 4448

Installation fitted by ELICOTT MACHINERY CO Port belonging to GLASGOW Contract No. 1943 When fitted 1943

fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. YES E.S.D. YES Gy.C. ✓ Sub.Sig. ✓

has been submitted and approved YES System of Distribution TWO WIRE INSULATED Voltage of supply for Lighting 120  
120 Power 120 Direct or Alternating Current, Lighting D.C. Power D.C. If Alternating Current state periodicity ✓ Prime Movers, ✓  
 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 ✓  
 as per Rule ✓ Generators, are they compound wound YES, are they level compounded under working conditions YES,  
 compound wound state distance between generators ✓ and from switchboard ✓ Where more than one generator is fitted are they  
 to run in parallel YES, are shunt field regulators provided YES Is the compound winding connected to the negative or positive pole  
POSITIVE Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing ✓ Have certificates of  
 machines under 100 kw. been supplied NO and the results found as per rule ✓ Are the lubricating arrangements and the construction  
 erators as per rule YES Position of Generators GENERATOR FLAT, ENGINE ROOM STARBOARD SIDE  
✓, is the ventilation in way of generators satisfactory YES are they clear of inflammable material YES, if situated  
 protected combustible material state distance from same horizontally ✓ and vertically ✓, are the generators protected from mechanical  
 damage from water, steam and oil YES, are the bedplates and frames earthed YES and the prime movers and generators in metallic  
YES Switchboards, where are main switchboards placed ADJACENT TO GENERATORS  
✓ accessible positions, free from inflammable gases and acid fumes YES, are they protected from mechanical injury and damage from water, steam  
YES, if situated near unprotected combustible material state distance from same horizontally ✓ and vertically ✓, what insulation  
 used for the panels EBONY ASBESTOS, if of synthetic insulating material is it an Approved Type YES, if of  
 ting material (slate or marble) are all conducting parts insulated therefrom as per Rule ✓ Is the frame effectually earthed YES  
 truction as per Rule YES, including accessibility of parts YES, absence of fuses on the back of the board INSTRUMENT FUSES ONLY AT BACK OF BOARD, individual fuses  
 earth lamps, voltmeters, etc., YES locking of screws and nuts YES, labelling of apparatus and fuses YES, fuses on the "dead"  
YES Description of Main Switchgear for each generator and arrangement of equaliser switches D.P. CIRCUIT BREAKERS  
OVERLOAD & REVERSE CURRENT TRIPS; T.P. ISOLATING SWITCH (INCLUDING EQUALISER)  
 outgoing circuit D.P. SWITCH & D.P. CARTRIDGE FUSES

ments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 3  
3 voltmeters ✓ synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the  
 nection YES Earth Testing, state means provided EARTH LAMPS  
A.I.E.E A.I.E.E

Circuit Breakers and Fuses, are they as per Rule STANDARD are the fuses an approved type STANDARD are all fuses labelled as  
YES If circuit breakers are provided for the generators, at what overload current did they open when tested ✓, are the reversed current  
 evices connected on the pole opposite to the equaliser connection ✓, have they been tested under working conditions, and at what current  
 erate YES Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule YES  
A.I.E.E A.I.E.E

they insulated and protected as per the appropriate Tables of the Rules STANDARD, if otherwise than as per Rule are they of an approved type YES,  
LESS THAN  
 um fall of pressure between bus bars and any point under maximum load 5%, are the ends of all cables having a sectional area of 0.04  
BUT ADEQUATE MECHANICAL CLAMPS PROVIDED.  
 nd above provided with soldering sockets NO Are paper insulated and varnished cambric insulated cables sealed at the ends ✓

24.3.48



with insulating compound ☒ or waterproof insulating tape ☒. 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. ☒ YES, if so, are they adequately protected. ☒ YES. Are cables in machinery spaces, galleys, laundries, etc., lead covered. ☒ YES or run in conduit ☒. State how the cables are supported and protected. SUPPORTED CLEAR OF BULKHEADS IN STEEL CLIPS

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. LEAD OR PLASTIC COMPOUND. 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.

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. ☒ YES, are they adequately ventilated. what is the 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 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. ☒ YES, are all fittings suitably ventilated. ☒ YES, are all fittings and accessories constructed and installed as per Rule. ☒ YES. Searchlight Lamps, No. of 1, whether fixed or portable. Fixed

are their fittings as per Rule. ☒ YES. Heating and Cooking, is the general construction as per Rule. ☒ YES, are the frames effectually earthed. ☒ YES, are heaters in the accommodation of the convection type. ☒ YES. 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. ☒ YES, and vertically. ☒ YES. 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. ☒ YES. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. ☒ YES. Have certificates of test for motors under

100 BHP intended for essential services been supplied and the results found as per Rule. ☒ YES. Control Gear and Resistances, are they constructed and fitted as per Rule. ☒ YES. Lightning Conductors, where required are they fitted as per Rule. ☒ YES. 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 the cartridge type. ☒ YES, are they of an approved type. ☒ YES. 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. 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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	3	20	120	167	400	SINGLE CYL. STEAM ENGINE		
EMERGENCY								
ROTARY TRANSFORMER								

#### GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	20	1	0.1969	167	182	40	RUBBER	LEAD COVERED & ARMoured
" " EQUALISER		1	0.0329		56	20	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

#### MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS	1	0.0521	60	75	20	RUBBER	LEAD COVERED & ARMoured
ENGINE ROOM	1	0.0521	30	75	700	"	"
CARGO FLOODLIGHTS & STORES FWD	1	0.0829	60	103	500	"	"
MIDSHIP ACCOM. & REFRIG. STRESS	1	0.0829	60	103	540	"	"
MIDSHIP ACCOM. LIGHTING	1	0.0521	30	75	320	"	"
CARGO FLOODLIGHTS AFT	1	0.0521	35	75	480	"	"
ACT DECKHOUSE STEERING FLAT & STORES	1	0.0829	60	103	600	"	"
BOAT DECK ACCOM. & FATHOMETER	1	0.0206	30	44	590	"	"
WHEELHOUSE	1	0.0829	60	103	200	"	"
BRIDGE DECK ACCOM. & BOAT FLAMES	1	0.0829	10	103	650	"	"
SEARCHLIGHT FERRIS	1	0.0829					

#### LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	0.0206	35	44	600	"	"
NAVIGATION LIGHTS	1	0.0206	10	44	590	"	"
LIGHTING AND HEATING	1	0.0206	30	44	4	"	"
BATTERY CHARGING	1	0.0206	1	5	40	"	"
SALINITY INDICATOR	1	0.0206	1	5	40	"	"

#### MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
REFRIG. COMPRESSOR	1	7	1	0.0658	59	88	600	RUBBER LEAD COVERED & ARMoured



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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 Engineers.

Date

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass

Minimum distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying Ampères feet from standard compass feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

The maximum deviation due to electric currents was found to be degrees on course in the case of the

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

Builder's Signature.

Date

Is this installation a duplicate of a previous case. LIBERTY SHIP If so, state name of vessel

Plans. Are approved plans forwarded herewith. If not, state date of approval

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 STANDARDS OF THE AMERICAN I.E.E.

MINOR REPAIRS HAVE BEEN CARRIED OUT AT THIS TIME AND INSULATION TESTS BROUGHT UP TO RULE REQUIREMENT

THE INSTALLATION HAS BEEN EXAMINED SO FAR AS PRACTICABLE, INSULATION TESTS CARRIED OUT, TESTED UNDER WORKING CONDITIONS AND STANDARD OF WORKMANSHIP AND CONDITION AS NOW SEEN IS CONSIDERED GOOD AND SATISFACTORY.

THE INSTALLATION IN MY OPINION BEING ELIGIBLE FOR CLASS, WITH RECORD OF L.M.C.

Noted

24.3.48.

Total Capacity of Generators. 60 Kilowatts.

The amount of Fee ... £ : : When applied for, - 19

Travelling Expenses (if any) £ : : When received. - 19

Committee's Minute

WED 7 APR 1948

Assigned

See Rpt. 9

Surveyor to Lloyd's Register of Shipping.



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