

No. 115567

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 24 SEP 1947

Writing Report... 22nd Sept 1947 When handed in at Local Office... 24 SEP 1947 Port of... London

Survey held at... London Date, First Survey... 9th Sept Last Survey... 15th Sept 1947 (Number of Visits... 3)

on the... S.S. "BENVACKIE" ex: "SAMAFFRIC" Tons { Gross... 72 1/2 Net... 4395

at... Bethlehem By whom built... Fairfield Shipyard Inc Yard No... — When built... 1944

ers... Ben Line Steamers Ltd Port belonging to... London

ical Installation fitted by... Fairfield Shipyard Inc Bethlehem Contract No... — When fitted... 1944

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

Plans been submitted and approved... Plan attached System of Distribution... Two wire insulated Voltage of supply for Lighting... 120

ing... 120 Power... 120 Direct or Alternating Current, Lighting... DC Power... DC If Alternating Current state frequency... — Prime Movers,

governing been tested and found efficient when the whole load is suddenly thrown on and off... Yes Are turbine emergency governors fitted with a

switch 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

ged 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

or machines under 100 kw. been supplied... — and the results found as per rule... — Are the lubricating arrangements and the construction

generators as per rule... Yes Position of Generators... On raised platform, starboard side

Engine room... is the ventilation in way of generators satisfactory... Yes are they clear of inflammable material... Yes, if situated

unprotected combustible material state distance from same horizontally... — and vertically... — are the generators protected from mechanical

y and damage from water, steam and oil... Yes, are the bedplates and frames earthed... Yes and the prime movers and generators in metallic

ct... Yes Switchboards, where are main switchboards placed... After bulkhead on starboard

side of Engine room

ey in accessible positions, free from inflammable gases and acid fumes... Yes, are they protected from mechanical injury and damage from water, steam

il... Yes, if situated near unprotected combustible material state distance from same horizontally... — and vertically... —, what insulation

ial is used for the panels... Ebony Asbestos, if of synthetic insulating material is it an Approved Type... Yes, if of

nsulating material (slate or marble) are all conducting parts insulated therefrom as per Rule... — Is the frame effectually earthed... Yes

construction as per Rule... Yes, including accessibility of parts... Yes, absence of fuses on the back of the board... Yes, individual fuses

ot and earth lamps, voltmeters, etc.,... Yes locking of screws and nuts... Yes, labelling of apparatus and fuses... Yes, fuses on the "dead"

switches... Yes Description of Main Switchgear for each generator and arrangement of equaliser switches... I-T-F 175 ampere

P. Circuit breakers with two pole overload and reverse current protection

d 175 ampere triple pole isolating switches

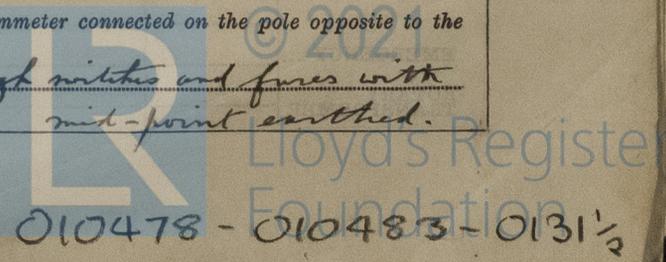
r each outgoing circuit... 100, 60 and 30 ampere double pole switches and

ouble pole cartridge type fuses. metal lead A.I.E.E. Standard

mpartments containing switchboards composed of fire-resisting material or lined as per Rule... Yes Instruments on main switchboard... 4

ers... 4 voltmeters... — synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

er connection... Yes Earth Testing, state means provided... Lamps in series fed through switches and fuses with mid-point earthed.



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A.I.E.E. Standard.

A.I.E.E. Standard

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type A, are all fuses labeled per Rule Yes, are the reversed current protection devices connected on the pole opposite to the equaliser connection Yes, have they been under working conditions Yes. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes. Cables, 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 Yes (less than 6%). state maximum fall of pressure between bus bars and any point under maximum load A, are the ends of all cables having a sectional area square inch and above provided with soldering sockets A. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends 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 supported Yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit —. State how the cables are supported and protected Lead covered and steel wire braided supported on brackets fixed to bulkhead and deckhead as required. Are all lead sheaths, armoring 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. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. Emergency Supply, state position — and method of control —. Navigation Lamps, are they separately wired Yes controlled by double pole switches Yes and fuses Yes. Are the switches and fuses in a position accessible only to the officers on watch Yes. Automatic indicator fitted Yes. Secondary Batteries, are they constructed and fitted as per Rule —, are they adequately ventilated Yes. Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present No, if so, how are they protected —. —, are all fittings suitably ventilated —. Are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of One, whether fixed or portable Fixed, are their fittings as per Rule Yes. 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 free from damage from steam and oil —, if situated near unprotected combustible material state minimum distance from same horizontally — and vertically —. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing —. Have certificates of test for motors of 100 BHP intended for essential services been supplied and the results found as per Rule —. Control Gear and Resistances, are they constructed and installed as per Rule —. Lightning Conductors, where required are they fitted as per Rule —. Ships carrying Oil having a temperature less than 150° F. Have all the special requirements of the Rules for such ships been complied with —, are all fuses of the cartridge type — are they of an approved type —. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed type —. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule Yes, are they suitably stored —. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory Yes (Please see notes).

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN ALTERNATIVE COMBUSTION ENGINE	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point.
MAIN ...	3	20	120	167	400	Whitton single cylinder steam engines.		
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.			
GENERATOR ...	20	1	0.1969	167	182	40	Rubber	Lead covered
" EQUALISER ...		1	0.0329	—	56	20	"	and braided clipped to brackets fixed to bulkhead and deckhead as required.
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR ...								
" GENERATOR ...								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
SWITCHBOARDS AND SECTION BOARDS ...						
Room and Shaft alley L.1.		1	0.0521	30	75	20 Rubber Lead covered and
Flood lights and Stairs L.2.		1	0.0521	20	75	660 " braided clipped
Deck Area: Cargo Floods & Refrig. L.3.		1	0.0829	40	103	450 " to brackets fixed
Deck Area: Lightings L.4.		1	0.0829	20	103	480 " to bulkhead and
Flood lights aft. L.5.		1	0.0521	25	75	320 " deckhead as
Deck Area: Steering Gear Room L.6.		1	0.0521	10	75	420 " required
Deck Area: and Bottomways L.7.		1	0.0829	40	103	500 " " "

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
LESS ...		1	0.0206	10	44	580 Rubber Lead covered and
NAVIGATION LIGHTS ...		1	0.0206	5	44	550 " braided clipped
LIGHTING AND HEATING ...						to brackets fixed to bulkhead and
Deck Area: Boat Floods L.9.		1	0.0829	20	103	580 " deckhead as
Deck light feeder L.10.		1	0.0082	3	26	620 " required
Emergency Charging (30A)		1	0.0206	5	44	4 " " "
Emergency Indicator System (S.B.)		1	0.0080	1	5	40 " " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
Emergency Compressor P.2.	1	7	1	0.0658	58	88	580 Rubber Lead covered and
							braided clipped to brackets fixed to bulkhead and deckhead as required

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 Yes If so, state name of vessel SS "SPECIALIST" Ex "SA"

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 installed in accordance with A.I.E.E. Standards and the installation has been tested under working conditions and the insulation of circuits and generators measured.

It was noted that the rating for temperature rise of generators was 40°C.

The installation is in my opinion such as could be accepted for classification subject to the following repairs being carried out:-

(a) An alternative supply to the Navigation lights is to be provided.

(b) The following circuits to have their insulation tests brought up to requirements:- (at main switchboard) L.1. Engine Room; L.3. Midship

L.4. Midship Acc; L.7. Boat Deck Acc; L.9. Bridge deck.

(c) Nos 1 & 3 generator voltmeters to be recalibrated to facilitate parallel operation of generators.

(d) No 3 generator field regulator to be overhauled. (e) Distribution boards to be overhauled.

(f) A set of correctly sized fuses to be provided throughout vessel and spare fuses to be provided.

(g) Revise - Binnacle light feed to bridge and Deck lights port side port.

Total Capacity of Generators 60 Kilowatts. Note: The above repairs are to be carried out upon the vessel at the port of Lieke.

The amount of Fee £ :
 Travelling Expenses (if any) £ :
 When applied for,19.....
 When received,19.....

Note: See 2/11/1947

J.H. Tiskell.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

DEC 3 007 1947

NOV 14 1947

Deferred See F.E. Mucky. rpt.

2m.10.38.—Transfer. (MADE IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minutes.)



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