

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

13 MAY 1942

Received at London Office.....

Date of writing Report.....19..... When handed in at Local Office.....19..... Port of Liverpool

No. in Survey held at Lytham & Preston Date, First Survey 28/11/41 Last Survey 20/4/1942
 Reg. Book. (Number of Visits.....6.....)

on the L.H. Water Tank Vessel "FRESH BROOK." Tons {Gross.....
 Net.....}

Built at Lytham By whom built Lytham S.B. & Eng. Co. Ltd Yard No. 868 When built 1942

Owners The Admiralty Port belonging to.....

Electrical Installation fitted by Lytham Shipbuilding & Eng. Co. Ltd Contract No. 868 When fitted 1942

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

Have plans been submitted and approved Yes System of Distribution Two wire Voltage of supply for Lighting 110

Heating — Power — Direct or Alternating Current, Lighting DC Power — If Alternating Current state periodicity — 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 — Generators, are they compound wound Yes, are they level compounded under working conditions Yes,

if not compound wound state distance between generators — and from switchboard — Where more than one generator is fitted are they

arranged to run in parallel —, 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 Yes and the results found as per rule Yes Are the lubricating arrangements and the construction

of the generators as per rule Yes Position of Generators In Engine Room

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

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

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

contact Yes Switchboards, where are main switchboards placed In Engine Room near generator

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

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

material is used for the panels Switches from etc mounted on 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 frame effectually earthed Yes

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

to 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 switches D.P. switch &

D.P. fuses

and for each outgoing circuit D.P. switch & fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 1

ammeters 1 voltmeters — synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection — Earth Testing, state means provided Cable Lamps

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Ad. Pattern are all fuses labelled as

per Rule Yes If circuit breakers are provided for the generators, at what overload current did they open when tested —, are the reversed current

protection devices connected on the pole opposite to the equaliser connection —, have they been tested under working conditions, and at what current

did they operate — Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule All Ad. Pattern

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 —,

state maximum fall of pressure between bus bars and any point under maximum load 3.1 V. are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends —



protected. — Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit —. State how the cables are supported and protected. All cables are lead covered & run in galvanized conduits on deck, close-hose clipped direct to steel & woodwork or on perforated trays, & protected where necessary.

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 brass bushes Ad Pattern 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 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 to. Secondary Batteries, are they constructed and fitted as per Rule —, are they adequately ventilated —

what is the battery capacity in ampère 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 _____, are all fittings suitably ventilated *Yes*

are all fittings and accessories constructed and installed as per Rule 440 Searchlight Lamps, No. of , whether fixed or portable.

....., are their fittings as per Rule..... 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 water.

steam and oil....., if situated near unprotected combustible material state minimum distance from same horizontally..... and vertically..... 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.....

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 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.....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..... are all fuses of the cartridge type.....

are they of an approved type..... 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..... 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

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 ...	1	10	110	91		Steam Engine		
EMERGENCY ...								
ROTARY TRANSFORMER								

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Fols.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	10	1	17/083	91	118 ✓	30	Rubber	Lead Covered
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

[illegible]

WIRELESS
NAVIGATION LIGHTS
LIGHTING AND HEATING
ENGINE RM, BOILER RM & ACCOMMODATION	1	7/044	13	31 ✓	20	Rubber	L.C.	
NAVIGATION & SIGNALLING	1	7/029	7	15 ✓	100	"	L.C.	
FORWARD.	1	7/029	13	15 ✓	60	"	L.C. in Conduits.	
DECK LANDING SUPPLY CABLES	1	7/064	28	46 ✓	40	"	L.C.	
MASTHEAD LIGHT	1	7/044	36	5 ✓	170	"	L.C. in Conduits	
SIDE LIGHTS	1	7/044	36	5 ✓	30	"	L.C.	
COMPASS LIGHTS	1	7/044	20	5 ✓	10	"	L.C.	

[illegible]

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.

THE LYTHAM SHIPBUILDING and
ENGINEERING COMPANY, LIMITED

Electrical Engineers.

Date 17/4/42.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 35 ft.

Minimum distance between electric generators or motors and steering compass 30 ft.

The nearest cables to the compasses are as follows:—

A cable carrying 20 Ampères 4 feet from standard compass 4 feet from steering compass.

A cable carrying 20 Ampères 4 feet from standard compass 4 feet from steering compass.

A cable carrying 7 Ampères 11 feet from standard compass 6 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 1/2 degrees on any course in the case of the standard compass, and 1/2 degrees on any course in the case of the steering compass.

THE LYTHAM SHIPBUILDING and
ENGINEERING COMPANY, LIMITED

Builder's Signature.

Date 17/4/42.

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 13th Dec. 1941

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

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 fitted on board under special survey and in accordance with the approved plans & specification. The installation has been tested under full working conditions and found satisfactory. The materials and workmanship are good.

Noted
L.Y.
15/5/42

Total Capacity of Generators 10. Kilowatts.

The amount of Fee £ 10 : 0 0 When applied for, 9 MAY 1942

Travelling Expenses (if any) £ 6 : 1/3 When received, 19.

H. Haffner

Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 12 MAY 1942

TUE 9 JUN 1942

Assigned See Minute on Liverpool H.R. Report. ABC

See Liv. J.E. 117563