

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report..... 23rd July 1942..... When handed in at Local Office..... 19..... Port of..... Liverpool

No. in Survey held at..... 1st Survey..... 28/11/41..... Last Survey..... 27/7/42.....  
Reg. Book.....

on the..... s.s. "FRESHENER"..... Tons { Gross..... 278  
Net.....

Built at..... Lytham..... By whom built..... Lytham, S.B. & Co. Ltd..... Yard No. 869..... When built..... 1942

Owners..... The Admiralty..... Port belonging to.....

Electrical Installation fitted by..... The Lytham Shipbuilding Co. Ltd..... Contract No. 869..... When fitted..... 1942

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

Have plans been submitted and approved..... Yes..... System of Distribution..... Three 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 adjacent to generators

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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, fuses etc mounted on back of main switchgear..... 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....., 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..... 1..... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection..... Earth Testing, state means provided..... Cassel Lamps.

Switches, Circuit Breakers and Fuses, are they as per Rule..... Yes....., are the fuses an approved type..... Admiralty 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 approved

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..... 3.14....., 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.....



**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.....

....., are all fittings suitably ventilated..... Yes

are all fittings and accessories constructed and installed as per Rule..... 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 faces 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 and found satisfactory..... Yes

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	500	Steam Engine		
						... ..		
EMERGENCY ...								
ROTARY TRANSFORMER								

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 ... ..	10	1	17.075	91	118	30	Latex	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	Butts	R.C.	
NAVIGATION & SIGNALLING.	1	7/029	7	15	100	"	"	
FORWARD	1	7/029	13	15	160	"	" in Contact	
DG. SUPPLY CABLES	1	7/064	28	44	440	"	L.C.	
MASTHEAD LIGHT	1	1/044	36	5	170	"	R.C. in Contact	
SIDE LIGHTS.	1	1/044	36	5	30	"	L.C.	
COMPASS LIGHTS	1	1/044	20	6	10	"	R.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  
R. Friedenthal

Electrical Engineers.

Date 24/7/42.

#### 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 12 feet from standard compass 12 feet from steering compass.

A cable carrying 20 Ampères 4 feet from standard compass 12 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 +24. 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 12 degrees on any course in the case of the standard compass, and 12 degrees on any course in the case of the steering compass.

THE LYTHAM SHIPBUILDING and  
ENGINEERING COMPANY, LIMITED  
R. Friedenthal

Builder's Signature

Date 24/7/42

Is this installation a duplicate of a previous case. Yes. If so, state name of vessel ss. *Walbrook*

Plans. Are approved plans forwarded herewith. No. If not, state date of approval 13/12/41.

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 metrical & workmanship are good.

Noted  
L.F.

27/8/42

Total Capacity of Generators 10. Kilowatts.

The amount of Fee ... £ 10 : 0 : 0 When applied for, 14 AUG 1942

Travelling Expenses (if any) £ 5 : 11/6 When received, 19

H. Haffner.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 18 AUG 1942

Assigned Transmit to London.

28 AUG 1942

See Dir. J.E. 118227



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Foundation