

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 28 APR 1944

Date of writing Report 12-4-44 When handed in at Local Office 1944 Port of Liverpool  
 No. in Survey held at Lytham. Preston. Date, First Survey 30/9/43 Last Survey 24/3/44  
 Reg. Book. (Number of Visits 10)  
 on the S.S. "FRESHBURN" Tons Gross 283 Net 93  
 Built at Lytham By whom built Lytham S. B. & Eng. Co. Ltd. Yard No. 874 When built 1944  
 Owners The Admiralty Port belonging to London.  
 Electrical Installation fitted by Lytham S. B. & Eng. Co. Ltd. Contract No. 874 When fitted 1944  
 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 Two wire Voltage of supply for Lighting 110  
 Heating Power Direct or Alternating Current, Lighting D.C. 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 (not received) 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 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, fuses etc mounted on main switchboard insulated bar to Admiralty requirements, if of synthetic insulating material is it an Approved Type, 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 Double pole switch  
 and fuses  
 and for each outgoing circuit Double pole switch and fuses.  
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard one  
 ammeter, one voltmeter, synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the  
 equaliser connection Earth Testing, state means provided Carrol Lamp.  
 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 Admiralty 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 volts 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 their fittings as per Rule. — Heating and Cooking, is the general construction as per Rule. —

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. \_\_\_\_\_

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, —.

Rule 425, are they suitably stored in dry situations.....426 Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory.....426

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 ...	1	10	110	91	500	Steam Engine.		
EMERGENCY ...								
ROTARY TRANSFORMER								

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Folt.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... ..	10	1	19/098	91	118 ✓	30	Rubber	Lead Covered.
" " EQUALISER ... ..								
...								
...								
...								
...								
...								
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR ... ..								
" " GENERATOR ... ..								

[illegible][illegible][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 15/4/44

R. Friedenthal

#### 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 6 feet from steering compass.

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

A cable carrying 5.5 Ampères 8 feet from standard compass 10 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 15/4/44

R. Friedenthal

Is this installation a duplicate of a previous case Yes If so, state name of vessel S.S. Ashwell

Plans. Are approved plans forwarded herewith No If not, state date of approval 10. 12. 42

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 and requirements of the Rules.  
The installation has been tested under full working conditions and found satisfactory.  
The materials and workmanship are good.

J. R. W.

Noted

3.5.44

Total Capacity of Generators 10 Kilowatts.

The amount of Fee ... £ 10 : 0 : 0 When applied for 21 APR 1944

Travelling Expenses (if any) £ 3 : 5 : 4 When received 19

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

LIVERPOOL 25 APR 1944

THURS 11 MAY 1944

Assigned

Transmit to London.

See p. machine rpt



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Foundation