

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

24 OCT 1945

Received at London Office.....

Date of writing Report 19/10/1945 When handed in at Local Office 20/10/1945 Port of BELFAST
 No. in Survey held at BELFAST Date, First Survey 16.4.45 Last Survey 17th OCTOBER 1945
 Reg. Book. 71064 on the SS "BROOM" Tons { Gross 347 Net 121
 Built at BOWLING By whom built SCOTT & SONS Yard No. When built 1934
 Owners FRONTIER TOWN S.S. Co. Ltd. (J. FISHER & SONS Ltd.) Port belonging to NEWRY
 Electrical Installation fitted by SUNDERLAND FORGE & ENG. Co. Contract No. When fitted 1945
 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 DC Power - If Alternating Current state frequency - Prime Movers,

has the governing been tested and found efficient when the whole 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 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 sindamyo, 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 DP. switch and fuses

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

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule - 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 earth lamps



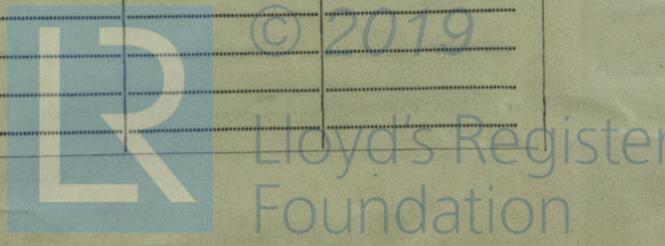
Lloyd's Register Foundation

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an approved type yes, are all fuses labelled as per Rule yes, are the reversed current protection devices connected on the pole opposite to the equaliser connection -, have they been tested under working conditions -. 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 -, 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 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 no, if so, are they adequately protected -. Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit yes. State how the cables are supported and protected main V.I.R. in conduit, local wiring L.C. clipped.

Are all lead sheaths, armouring and conduits effectually bonded and earthed yes. Refrigerated chambers, are the cables and fittings as per Rule -. 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 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 -, are they adequately ventilated -. 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 yes. 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 -. 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 -. 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 -. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type -. 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 megger 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	1	2½	110	22.7	625	steam engine.		
EMERGENCY ...								
ROTARY TRANSFORMER								



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 SUNDERLAND FORGE & ENGINEERING CO. LTD., Electrical Engineers. Date 19.10.45.
 BELFAST. *J. Butler*

COMPASSES.

Minimum distance between electric generators or motors and ~~standard~~ compass... *80 feet.*

Minimum distance between electric generators or motors and steering compass... *-*

The nearest cables to the compasses are as follows:—

A cable carrying *0.5* Ampères *led into* feet from ~~standard~~ compass... feet from steering compass.

A cable carrying *2* Ampères *7* 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... *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 *nil* degrees on *any* course in the case of the ~~standard~~ compass, and... degrees on... course in the case of the steering compass.

R. J. Kurchison Builder's Signature Date

Is this installation a duplicate of a previous case... *no* If so, state name of vessel...

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 tested under full working conditions and found satisfactory. materials and workmanship are good.*

Total Capacity of Generators... *2 1/2* Kilowatts.

The amount of Fee ... £ *5* : - : { When applied for, *22/10/1945*
 Travelling Expenses (if any) £ : : { When received, *19*

R. J. Kurchison
 Surveyor to Lloyd's Register of Shipping.

FRI. 23 NOV 1945

Committee's Minute
 Assigned *As above*

noted Bell 9/11/45

2m. 10. 38.—Transfer. (MADE IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

