

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

9th OCT 1947

Received at London Office

Date of writing Report... 26th SEPT. 1947 When handed in at Local Office... 7. 10. 47 Port of... GLASGOW

No. in Survey held at... GLASGOW Date, First Survey... 22nd APRIL Last Survey... 25th SEPTEMBER 1947
Reg. Book. (Number of Visits... 6726)

90615 on the... CRAFTSMAN Tons { Gross... Net...

Built at... PORT GLASGOW By whom built... LITHGOWS LTD Yard No... 1020 When built... 1947

Owners... CHARENTE S.S. CO LTD Port belonging to... LIVERPOOL

Electrical Installation fitted by... CAMPBELL & ISHERWOOD LTD Contract No... 1020 When fitted... 1947

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

Have plans been submitted and approved... YES System of Distribution... SINGLE WIRE HULL RETURN Voltage of supply for Lighting... 110

Heating... 110 Power... 110 Direct or Alternating Current, Lighting... D.C. Power... D.C. 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... YES 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... No, 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... STARBOARD SIDE OF 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 GENERATORS

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... SINDANYO, 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... 150 AMP S.P. KNIFE

PATTERN SWITCH WITH FUSE

and for each outgoing circuit... 100 AMP 60 AMP OR 30 AMP S.P. 3WAY SELECTOR SWITCH WITH FUSE

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule... YES Instruments on main switchboard... THREE

ammeters... THREE 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...

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 If circuit breakers are provided for the generators, at what overload current did they open when tested... are the reversed current

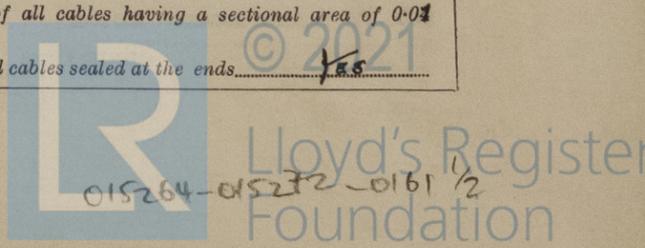
protection devices connected on the pole opposite to the equaliser connection... have they been tested under working conditions, and at what current

did they operate... Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule... 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... W.E.

state maximum fall of pressure between bus bars and any point under maximum load... 4.5 VOLTS, are the ends of all cables having a sectional area of 0.01

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



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 . Are cables laid under machines or floorplates . Are they adequately protected . Are cables in machinery spaces, galleys, laundries, etc., lead covered or run in conduit . State how the cables are supported and protected. **MAINS - L.C.B. CABLES IN STEEL PIPE**
MACHINERY SPACE - L.C.A.B. CABLE CLIPPED TO STEELWORK
ACCOMMODATION - L.C.B. CABLE CLIPPED TO WOODWORK

Are all lead sheaths, armouring and conduits effectually bonded and earthed . 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 . Where unarmoured cables pass through beams, etc., are the holes effectively bushed and with what material **LEAD**. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule . Emergency Supply, state position and method of control . Navigation Lamps, are they separately wired controlled by separate double pole switches and fuses . Are the switches and fuses in a position accessible only to the officers on watch . Is an automatic indicator fitted . Secondary Batteries, are they constructed and fitted as per Rule . Are they adequately ventilated . What is the battery capacity in ampere hours . Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof . Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present . If so, how are they protected . and where are the controlling switches fitted . Are all fittings suitably ventilated . 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 . 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 . 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 . Are they suitably stored in dry situations . Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory .

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	3	15	110	136	450	STEAM ENGINE		
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.			
MAIN GENERATOR	15	1	37.072	136	152	30	RUBBER	L.C.B.
" EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	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.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
CARGO PROJECTOR SECTION.	1	19.064	44.5	83	6	RUBBER	L.C.B.
POOP AND MIDSHIP ACCOM. LT ⁹ SECTION	1	19.064	53.4	83	100	RUBBER	L.C.B. IN PIPE
REFRIGERATOR AND ENGINE ROOM SECTION.	1	19.083	91.8	118	9	RUBBER	L.C.B.

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7.044	10	31	120	RUBBER	L.C.B.
NAVIGATION LIGHTS	1	7.036	21	24	90	RUBBER	L.C.B.
LIGHTING AND HEATING	1	19.064	44.5	83	156	RUBBER	L.C.B. IN PIPE
SALOON ACCOM. + NAVIGATION.	1	7.044	21.5	31	210	RUBBER	L.C.B. IN PIPE
POOP ACCOMMODATION.	1	7.036	15	24	2	RUBBER	L.C.B.
MIDSHIP ACCOM. LT ⁹ PORT.	1	7.044	17	31	15	RUBBER	L.C.B.
MIDSHIP ACCOM. LT ⁹ STBD.	1	7.064	30	46	9	RUBBER	L.C.B.
ENGINE ROOM LT ⁹	1	7.044	20	31	159	RUBBER	L.C.B. IN PIPE
CARGO LT ⁹ AFT	1	7.044	24.5	31	300	RUBBER	L.C.B. IN PIPE
CARGO LT ⁹ FWD	1	19.064	19	83	100	RUBBER	L.C.B. IN PIPE
PANTRY POWER BOARD.	1	7.064	28	75	75	V.C.	L.C.B.
LAUNDRY POWER BOARD.	1	19.064	60	83	100	RUBBER	L.C.B. IN PIPE
VENT FAN BOARD	1	7.036	-	24	165	RUBBER	L.C.B. IN PIPE
GYRO (WIRING ONLY)	1	7.064	20	46	350	RUBBER	L.C.B. IN PIPE
PROJECTOR (WIRING ONLY)	1	7.064	20	46	350	RUBBER	L.C.B. IN PIPE

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
DOMESTIC REFRIGERATOR	1	3	1	7.044	24.3	31	75	RUBBER	L.C.B.
MONO PUMPS	2	1.5	1	7.036	13.6	24	45	RUBBER	L.C.B.
VENT FANS	2	2.5	1	7.044	18.3	31	270	RUBBER	L.C.B. IN PIPE
VENT FAN	1	2.5	1	7.036	20.4	24	15	RUBBER	L.C.B.
ASH HOIST	1	2.5	1	7.044	18	31	115	RUBBER	L.C.B.

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.

CAMPBELL & SHERWOOD LTD. Electrical Engineers. Date 2-10-1947

COMPASSES.

Minimum distance between electric generators or motors and standard compass TWENTY-EIGHT FEET.

Minimum distance between electric generators or motors and steering compass TWENTY-SEVEN FEET.

The nearest cables to the compasses are as follows:-

A cable carrying 21 Ampères 7 feet from standard compass 10 feet from steering compass.

A cable carrying 23 Ampères LED INTO standard compass LED INTO 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 Nil degrees on Any course in the case of the steering compass.

LITHGOWS LIMITED, Builder's Signature Date 2/10/47 H. H. White Secretary

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

Plans. Are approved plans forwarded herewith No. If not, state date of approval 1st APRIL 1947 AND 29th AUGUST 1947

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 installation of this vessel has been fitted on board under Special Survey tested under working conditions and found satisfactory. The quality of materials and workmanship is good.

Noted 17. 6. 47

Total Capacity of Generators 45 Kilowatts.

The amount of Fee £ 33 : 15 : When applied for

Travelling Expenses (if any) £ : : When received

M. Gardiner Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned Su F. Entry Report (Exk No 23551)



5m.4.39.-Transfer. (MADE AND PRINTED IN ENGLAND.)