

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

JUL 25 1940

Received at London Office

Date of writing Report 13th July 1940. When handed in at Local Office 23rd July 1940. Port of GLASGOW.

No. in Reg. Book 72950. Survey held at PORT GLASGOW & GLASGOW. Date, First Survey (1940) Mar 18. Last Survey 10th July 1940. (Number of Visits 14)

on the S.S. "DALESMAN" Tons { Gross 6343.44 Net

Built at PORT GLASGOW. By whom built LITHGOWS LTD. Yard No. 927. When built 1940.

Owners CHARENTE S.S. CO LTD (TEL. HARBOR. MAR) Port belonging to LIVERPOOL.

Electrical Installation fitted by CAMPBELL & ISHERWOOD LTD. Contract No. 927. When fitted 1940.

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 Single wire hull return. Voltage of supply for Lighting 110.

Heating Power 110. Direct or Alternating Current, Lighting AC. Power AC. 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 No, are shunt field regulators provided Yes. Is the compound winding connected to the negative or positive pole

positive. 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 Main generator 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 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. Insidan Yes, 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 S.P. Switch

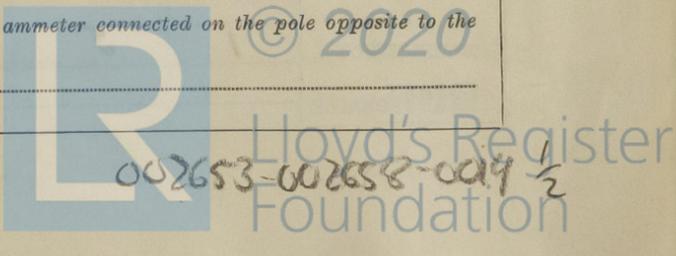
and S.P. Fuse.

and for each outgoing circuit S.P. Switch and S.P. Fuse.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. Instruments on main switchboard 2

ammeters 2 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, 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 5/8" 1/16, 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 —, if so, are they adequately protected —.

Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit —. State how the cables are supported and protected.

Mains L.C.B. in galv tubing Machinery spaces L.C.B. clipped

Accommodation L.C.B. 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 effectually 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 Special compartment and method of control controlled by its own switchboard

off engine room alleyway and driven by TL engine Navigation Lamps, are they separately wired Yes controlled by separate

double pole switches SP Sw. and fuses SP Fuse 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 —, 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 Yes.

and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil Yes, 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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	15	110	136	460	Steam engine		
Aux ^y	1	7 1/2	110	68	700	Steam engine		
EMERGENCY	1	5	110	45.5	1500	oil engine	oil above 150° F.	
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	10	VIR.	L.C.B.
" " EQUALISER								
Aux ^y	7 1/2	1	19/064	68	83	10	VIR.	L.C.B.
EMERGENCY GENERATOR	5	1	19/064	45.5	83	6	VIR.	L.C.B.
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
AUX. SWITCHBOARDS AND SECTION BOARDS						
MAIN S.B. To AUXILIARY S.B.	1	19/064	75.9	83	45	VIR. L.C.A.B.
CARGO S.B.	1	7/064	40	46	45	VIR. L.C.A.B.
ACCOMMODATION S.B.	1	7/052	36	37	120	VIR. L.C.B. IN CONDUIT
ENGINE ROOM S.B.	1	7/044	28.4	31	5	VIR. L.C.A.B.

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.	
WIRELESS		1	7/036	18.5	24	140	VIR. L.C.B. IN CONDUIT
NAVIGATION LIGHTS DB.		1	3/036	5.8	12.0	156	" L.C.B. - "
LIGHTING AND HEATING							
POOP DB.		1	7/029	12	18.2	196	" L.C.B. IN CONDUIT.
ENGINE ROOM DB.		1	7/086	22.3	24	5	" L.C.A.B.
AFT. CARGO DB.		1	7/036	20	24	116	" L.C.B. IN CONDUIT
FORW. CARGO DB.		1	7/036	20	24	220	" L.C.B. - "
MIDSHIP DB.		1	7/036	17.5	24	5	" L.C.B. - "
SALOON DB.		1	7/029	13.1	18.2	120	" L.C.B. - "
SEARCHLIGHT (WIRING ONLY)		1	7/064	40	46	288	" L.C.B. - "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
FORW. ASH HOIST.	1	2	7/086	18	24	65	VIR. L.C.A.B.
AFT. ASH HOIST	1	2	7/086	18	24	40	VIR. L.C.A.B.
DOMESTIC REFRIGERATOR.	1	2	7/086	18	24	35	VIR. 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 BROTHERS LTD.

Benjamin

Electrical Engineers.

Date *20/7/40*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *25 feet*

Minimum distance between electric generators or motors and steering compass *20 feet*

The nearest cables to the compasses are as follows:—

A cable carrying *36* Ampères *led into* feet from standard compass *led into* feet from steering compass.

A cable carrying *5.8* Ampères *10* feet from standard compass *10* 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 *fn.*

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted *fn.*

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

John Macfarlane Secretary

Builder's Signature.

Date *22/7/40*

Is this installation a duplicate of a previous case _____ 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 the vessel has been fitted on board under special survey, tested under full working conditions and found satisfactory.

The materials and workmanship are good.

206
23/7/40

Noted.
26/7/40

Total Capacity of Generators *27 1/2* Kilowatts.

The amount of Fee ... £ *21 : 5* : When applied for, *23 JUL 1940*

Travelling Expenses (if any) £ *9/6* : When received, *25th July 1940* *Ref. 27/7*

Committee's Minute *Glasgow* *23 JUL 1940*

Assigned _____

H. G. Findlay

Surveyor to Lloyd's Register of Shipping.

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



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