

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

13 JAN 1944

Date of writing Report 28 December 1943 When handed in at Local Office 10 1 1944 Port of GLASGOW.

No. in Survey held at GREENOCK Date, First Survey 17 June 1943 Last Survey 20 December 1943  
Reg. Book. 36932. on the S.S. 'CLAN URQUHART'Built at GREENOCK. By whom built GREENOCK DOCKYARD CO. LTD. Yard No. 454. When built 1943  
Owners THE CLAN LINE STEAMERS LTD. Port belonging to GLASGOW.Electrical Installation fitted by ARTHUR WATSON & DUNDAS. Contract No. 454. When fitted 1943  
Is vessel fitted for carrying Petroleum in bulk - Is vessel equipped with D.F. E.S.D. Gy.C. Sub.Sig.

Have plans been submitted and approved. System of Distribution two wire Voltage of supply for Lighting 220.

Heating Power 220 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. Are turbine emergency governors fitted with a

trip switch as per Rule. Generators, are they compound wound, are they level compounded under working conditions.

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. 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 and the results found as per rule. Are the lubricating arrangements and the construction

of the generators as per rule. Position of Generators Lower deck in way of engine &amp; boiler casing

is the ventilation in way of generators satisfactory. are they clear of inflammable material, 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. are the bedplates and frames earthed and the prime movers and generators in metallic

contact. Switchboards, where are main switchboards placed near generators.

are they in accessible positions, free from inflammable gases and acid fumes. are they protected from mechanical injury and damage from water, steam

and oil, if situated near unprotected combustible material state distance from same horizontally and vertically, what insulation

material is used for the panels. 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.

Is the construction as per Rule, including accessibility of parts, absence of fuses on the back of the board, individual fuses

to pilot and earth lamps, voltmeters, etc., locking of screws and nuts, labelling of apparatus and fuses, fuses on the "dead"

side of switches. Description of Main Switchgear for each generator and arrangement of equaliser switches.

Triple pole circuit breaker fitted with 0/1 &amp; R/S trips, third pole acting as

equalizer and for each outgoing circuit. Supply to Refrig. Switchboard &amp; forced draught fan controlled by C.B.'s

fitted with 0/1 trips. Other circuits controlled by D.P. Switch &amp; fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. Instruments on main switchboard 3

ammeters 3 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.

Switches, Circuit Breakers and Fuses, are they as per Rule, are the fuses an approved type, are all fuses labelled as

per Rule. 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. 15% Fload. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule.

Cables, are they insulated and protected as per the appropriate Tables of the Rules, 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 6.5 kV are the ends of all cables having a sectional area of 0.04

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



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.
MAIN ...	3	150.	220.	682	500.	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.

*Arch Watson Dundas*

Electrical Engineers.

Date

*4/1/44*

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass

*27 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 *12* Ampères *14* feet from standard compass *14* feet from steering compass.

A cable carrying *12* Ampères *18* feet from standard compass *12* 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 *nil* degrees on *any* course in the case of the steering compass.

Builder's Signature.

Date

*6/1/44*

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

*18<sup>th</sup> May 43*

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

*Noted*

*L.P.*

*31/1/44*

Total Capacity of Generators *450* Kilowatts.

The amount of Fee ... £ *55* :

*1/5 Birmingham*

*4/5 Glasgow*

Travelling Expenses (if any) £ *3* : *1/6* :

When applied for,

*At Gt.*

When received.

*19*

*S. G. Findlay*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*GLASGOW*

*JAN 1944*

Assigned



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