

Hull JE. 4/12/43
28/1/43

Rpt. 13.

No. 51877.
24 MAR 1943

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report.....19..... When handed in at Local Office.....23 MAR 1943.....19..... Port of.....HULL.....

No. in Survey held at.....Gainsborough & Sunderland.....Date, First Survey.....8.12.42.....Last Survey.....17.3.1943.....
Reg. Book. Suppt.....(Number of Vols.....5.....)

66538 on the Single Screw S.S. "EMPIRE BEIN" Tons { Gross.....242.....
Net.....—.....

Built at.....Gainsborough.....By whom built.....J.S. Watson Gainsborough Ltd.....Yard No.....1533.....When built.....1943.....

Owners.....The Ministry of War Transport.....Port belonging to.....

Electrical Installation fitted by.....Humber Electrical Engineering Co Ltd.....Contract No.....When fitted.....1943.....

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 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.....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 on platform.....

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.....Starboard side of engine room 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.....Sundays.....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.....Double pole, pinch

break, knife switches, and double pole fuses.....

and for each outgoing circuit.....Double pole, pinch break, knife switches, and double

pole fuses.....

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

ammeters.....one.....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.....Lamps connected to earth via switches & fuses.....

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

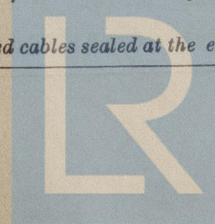
protection devices connected on the pole opposite to the equaliser connection.....—.....have they been tested under working conditions, and at what current

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.....—.....

state maximum fall of pressure between bus bars and any point under maximum load.....3V.....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.....—.....



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Foundation

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 ...	<i>Gen</i>	<i>4.5</i>	<i>110</i>	<i>41</i>	<i>500</i>	<i>Steam engine</i>	<i>—</i>	<i>—</i>
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	4.5	1	7064	41	46	36	VITP	In conduit
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

[illegible]

MOTOR CABLES.

[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.

BY THE LLOYD'S REGISTER ELECTRICAL ENGINEERS

W.E. Pinner

Electrical Engineers.

Date

COMPASSES.

Minimum distance between electric generators or motors and standard compass 75 ft.

Minimum distance between electric generators or motors and steering compass 70 ft.

The nearest cables to the compasses are as follows:—

A cable carrying 25 Ampères inside feet from standard compass 5' feet from steering compass.

A cable carrying 25 Ampères 5' feet from standard compass inside 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 every course in the case of the

standard compass, and Nil degrees on every course in the case of the steering compass.

J. S. WATSON (GAINSBOROUGH)

J.S. Watson

Builder's Signature.

Date 20th March 1943

Governing Director.

Is this installation a duplicate of a previous case Yes If so, state name of vessel EMPIRE MEADOW

Plans. Are approved plans forwarded herewith No If not, state date of approval 11.7.41

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith No

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.) The electrical

equipment of this vessel was installed under special survey
and in accordance with the approved plans and with the
specification. The materials used are of good quality and the
workmanship is good. On completion the equipment was operated
under working conditions with satisfactory results and the
insulation resistance of all circuits and apparatus was measured
and found good.

This equipment is in my opinion suitable for a classed vessel.

Noted

LP

31/3/43.

Total Capacity of Generators 4.5 Kilowatts.

The amount of Fee ... £ 3 : 0 : 23 MAR. 1943

+ 25% for Spec

Travelling Expenses (if any) £ : : When received.19.....

W.H. Cornwell & Santer
Surveyor to Lloyd's Register of Shipping.

FRI. 2 APR 1943

Committee's Minute

Assigned

See Int. J.E. 51877



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Foundation