

Rpt. 13.

No. 51542.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

24 JAN 1942
Received at London Office. 29 MAR 1942

Date of writing Report.....19..... When handed in at Local Office.....19..... Port of..... **HULL**

No. in Survey held at *Hull & Hessel* Date, First Survey *15. 12. 41.* Last Survey *15. 2. 42.*
Reg. Book. (Number of Visits.....13.....)

on the *Se Tug* **EMPIRE LINDEN** Tons { Gross *229*
Net *Nil*

Built at *Hessel* By whom built *Hy Scott & Co* Yard No. *419* When built *1942-*

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

Electrical Installation fitted by *The Yorkshire Electrical Engineering Co Ltd* Contract No. *✓* When fitted *1942*

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 *Yes* System of Distribution *Parallel, Constant pressure, 2 wire* Voltage of supply for Lighting *110*

Heating *✓* Power *✓* Direct or Alternating Current, Lighting *D.C* 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 *Engine room, starboard*

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 *Engine Room, adjacent to 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 *Insamite*, 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

D.P. Switchgear & fuses with bus bars arranged one pair for each dynamo.

and for each outgoing circuit *D.P. Change over switchgear & D.P. fuses.*

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 *Clark lamps & switchgear*

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.....
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..... 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....., are they suitably stored in dry
situations..... Insulation Tests, has the insulation resistance of all circuits and apparatus been megger 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	2	4	110	36.5	500	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 For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rate.			
MAIN GENERATOR	4.	Gnc	7/064	36.5	46	26	V.R	L.C + Arm 2
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS ...		Gne	7/064	15	46	-	V.I.R	Special Broadcast Cath
Accommodation		2	7/029	16	30	160	"	in contact
Navigation		Gne	3/036	4	10	160	"	do
Note Engine Room from Main board.								

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.

AS THE WORKS CENTRAL ENGINEERS LTD

W. E. Skelton

Electrical Engineers.

Date

COMPASSES.

Minimum distance between electric generators or motors and standard compass

Minimum distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying Ampères feet from standard compass feet from steering compass.

A cable carrying Ampères 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

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

The maximum deviation due to electric currents was found to be degrees on course in the case of the standard compass, and degrees on course in the case of the steering compass.

Builder's Signature.

Date

Is this installation a duplicate of a previous case

Yes

If so, state name of vessel

EMPIRE BIRCH

(with minor additions)

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

This Electrical installation has been fitted on board in accordance with the Rules, the approved plans & the Specifications.

The Materials & workmanship are good & when tried under working conditions & tested as prescribed by the Rules it was found satisfactory in every respect.

Notes
J.P.
26/3/42

Total Capacity of Generators Kilowatts.

The amount of Fee ...

£ *25/0* : 0 :
25/0 : 0 :
10 0 : 0 :

When applied for
23 FEB 1942
When received
.....19.....

Travelling Expenses (if any) £

When received
.....19.....

Surveyor to Lloyd's Register of Shipping.

FRL 27 MAR 1942

Committee's Minute

Assigned

See H.L. 76 51542