

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 20 AUG 1941

Date of writing Report.....19..... When handed in at Local Office.....18 AUG 1941..... Port of.....HULL

No. in Survey held at.....Goole..... Date, First Survey.....25-4-41..... Last Survey.....25-6-41.....  
Reg. Book..... (Number of Visits.....8.....)

..... on the Steam Tug **EMPIRE OAK** Tons {Gross.....482.....  
Net.....40.....

Built at.....Goole..... By whom built.....Goole S.B. & Rep. Co. Ltd. Yard No.....354..... When built.....1941-5

Owners.....Ministry of Shipping..... Port belonging to.....Goole

Electrical Installation fitted by.....Humber Electrical Engineering Co. Ltd. Contract No..... When fitted.....1941-6

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.....Parallel..... Constant pressure Voltage of supply for Lighting.....110.....

Heating.....Power..... Direct or Alternating Current, Lighting.....Direct..... 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..... and the results found as per rule..... Are the lubricating arrangements and the construction of the generators as per rule.....Yes.....

Position of Generators.....Engine Room, starboard side....., 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.....Sandwich....., 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.....

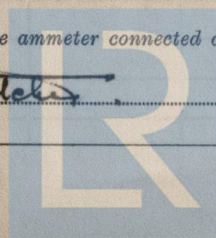
Is the construction as per Rule.....Yes....., including accessibility of parts.....Yes....., absence of fuses on the back of the board.....Yes....., individual fuses to pilot and earth lamps, voltmeters, etc.....Yes..... locking of screws and nuts.....Yes....., labelling of apparatus and fuses.....Yes....., fuses on the "dead" side of switches.....Yes.....

Description of Main Switchgear for each generator and arrangement of equaliser switches.....D.P. Switches & fuses.....

and for each outgoing circuit.....D.P. Switches & fuses to DG. Single pole Switches with D.P. fuses to remainder.....

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule..... 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.....Earth lamps & switches.....





over motors of 100 BHP and have been inspected by the Surveyors during manufacture and testing..... Have certificates of test for motors under 0 BHP intended for essential services been supplied and the results found as per Rule..... Control Gear and Resistances, are they constructed and tested 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..... 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 locations..... Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory.....

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 ...	One	12	110	109	400	Steam Engine	✓	✓
EMERGENCY ...								
ROTARY TRANSFORMER								

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH	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.	(lead plus return feet).		
MAIN GENERATOR ... ..	12	Two	19/052	109	128	15	V.I.R.	L.C. Arm & brushes
" " EQUALISER ... ..	✓							
EMERGENCY GENERATOR ... ..	✓							
ROTARY TRANSFORMER: MOTOR ... ..	✓							
GENERATOR ... ..	2107							

AUX. SWITCHBOARDS AND SECTION BOARDS ...							
<i>Cavanah</i>	<i>One</i>	<i>7/029</i>	<i>10</i>	<i>15</i>	<i>130</i>	<i>V.I.E</i>	<i>L.C. Cond &amp; brads</i>
<i>Accommodation Motors</i>	"	<i>7/064</i>	<i>30</i>	<i>46</i>	<i>140</i>	"	"
<i>Ingr. Pumps &amp; Accommodation Efp.</i>	"	<i>4/044</i>	<i>18</i>	<i>31</i>	<i>6</i>	"	"

WIRELESS	...	...	...	...	...	...	...	...	...
NAVIGATION LIGHTS	Sub. Circuits	...	"	7/044	10	31	120	V.I.R.	L.C. & Arm
LIGHTING AND HEATING	Sub. Circuits	...	"	"	5	5	80 max	"	"
			"	"	2	5	60 ..	"	L.C
DG			"	7/044	—	31	—	"	"
16* Search Light			"	7/036	10	24	46	"	"
Household Refrigerator			"	3/036	7	10	25	"	"

[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 HUNTER ELECTRICAL ENGINEERING CO.

*H. S. Platt*

Electrical Engineers.

Date

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass

70 ft.

Minimum distance between electric generators or motors and steering compass

60 ft.

The nearest cables to the compasses are as follows:—

A cable carrying 4 Ampères 14 feet from standard compass 4 feet from steering compass.

A cable carrying 2 Ampères 2 feet from standard compass 2 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

Is this installation a duplicate of a previous case

*Yes*

If so, state name of vessel

*EMPIRE LARCH.*

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

*This installation has been fitted on board in accordance with the approved plans & the Society's Rules.*

*The workmanship & materials are good & when subjected to the prescribed tests & tried under working conditions it was found satisfactory in every respect.*

*Noted*

*24*

*29/8/41*

Total Capacity of Generators 12 Kilowatts.

The amount of Fee ... £ 12: —:

When applied for, 19.8.19.41

Travelling Expenses (if any) £ : :

When received, 19.8.19.41

*D. J. C. Colman*

Surveyor to Lloyd's Register of Shipping.

TUE. 2 SEP 1941

Committee's Minute

Assigned

*See Sub 26 51299*



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