

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

27 JAN 1942

30 JAN 1942

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

No. in Survey held at **Goole** Reg. Book. Date, First Survey **1.9.41** Last Survey **11.12.1941**  
(Number of Visits **14**)

on the **Tanker** **EMPIRE BOY** Tons { Gross **859** Net **362**

Built at **Goole** By whom built **Goole S.B. Reps Co. Ltd** Yard No. **361** When built **1941-12**

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

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

Is vessel fitted for carrying Petroleum in bulk **Yes** Is vessel equipped with D.F. **✓** E.S.D. **✓** Gy.C. **✓** Sub.Sig. **✓**

Have plans been submitted and approved **Yes** System of Distribution **Constant pressure, Parallel** Voltage of supply for Lighting **110**  
**2 Wire**

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 **✓**

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**

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 **Sundamyo**, 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**

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**

of Shipping

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 Yes, have they been tested under working conditions Yes. 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 Yes, state maximum fall of pressure between bus bars and any point under maximum load 5 rolls, 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 Yes with insulating compound Yes or waterproof insulating tape Yes. 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 No, if so, are they adequately protected Yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit Yes. State how the cables are supported and protected Cables clipped to bulkheads etc. Armoured in engine room

Spaced & run in solid drawn conduit on deck & in vicinity of Cargo Tanks etc.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes. Refrigerated chambers, are the cables and fittings as per Rule Yes. 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 Yes and method of control Yes.

Navigation Lamps, are they separately wired Yes, controlled by separate double pole switches Yes and fuses Yes. Are the switches and fuses in a position accessible only to the officers on watch Yes, is an automatic indicator fitted No. Secondary Batteries, are they constructed and fitted as per Rule Yes, are they adequately ventilated Yes.

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 Yes, if so, how are they protected Flame proof lamps in pump rooms & other dangerous spaces and where are the controlling switches fitted Outside of dangerous spaces, are all fittings suitably ventilated Yes, are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of 1, whether fixed or portable Yes, are their fittings as per Rule Yes. Heating and Cooking, is the general construction as per Rule Yes, are the frames effectually earthed Yes, are heaters in the accommodation of the convection type Yes. 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 Yes and vertically Yes. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing Yes. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule Yes. Control Gear and Resistances, are they constructed and fitted as per Rule Yes. Lightning Conductors, where required are they fitted as per Rule Yes. 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 Yes, are all fuses of the cartridge type Yes, are they of an approved type Yes. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type Yes. 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	One	12	110	109	550	Steam Engine	✓	✓
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX LENGTH (lead plus return loss).	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.	Rule.			
MAIN GENERATOR	12	One	19/283	109	118	16	V.I.R.	L.C.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS	No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX LENGTH (lead plus return loss).	INSULATED WITH.	HOW PROTECTED.
Navigation	One	3/036	2	10	260	V.I.R.	L.C. in tube.
Wheel House (Fixed in the case)	"	7/044	3	31	60	"	L.C.
Accommodation	"	7/044	14	3	200	"	L.C. in tube
Engine Room	"	"	9	"	12	"	L.C. & Arm'd
After Cabin	"	7/029	9	15	88	"	L.C. & Arm'd
D.G.	"	7/064	23	46	-	-	-

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	NAVIGATION LIGHTS	LIGHTING AND HEATING	No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX LENGTH (lead plus return loss).	INSULATED WITH.	HOW PROTECTED.
		All but circuits except Flood lights	One	1/044	2.5	5	120 max	V.I.R.	L.C. with wire and lead
			"	3/036	3	10	150 max	V.I.R.	L.C. in tube

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.
None		

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 GENERAL ELECTRICAL ENGINEERS OF

*W. B. Shattuck*

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..... If so, state name of vessel .....

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

*This Electric installation has been fitted in board in accordance with the Rules, the approved specifications & plans. The workmanship & materials are good & when tested as prescribed by the Rules it was found satisfactory in every respect*

*W. B. Shattuck  
 6/2/42*

Total Capacity of Generators *12* Kilowatts.

The amount of Fee ...	£ 12 : 0	When applied, <i>27 JAN 1942</i>
+ 25% for Spec.	3 : 0	.....19.....
	15 : 0	
Travelling Expenses (if any)	£ : :	When received, .....

*W. B. Shattuck*  
 Surveyor to Lloyd's Register of Shipping.

FRI, 27 FEB 1942

Committee's Minute .....  
 Assigned *See Ind JE 51479*

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

