

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

6 SEP 1943

Received at London Office 9 SEP 1943

Date of writing Report.....19..... When handed in at Local Office.....19..... Port of HULLNo. in Survey held at Gainsborough & Hull Date, First Survey 13. 7. 43. Last Survey 17. 8. 1943.
Reg. Book. (Number of Visits.....4.....)16512 on the EMPIRE MUSTANG Tons { Gross 242
Net 114Built at Gainsborough By whom built J. S. Watson Yard No. 1534 When built 1943Owners The Ministry of War Transport Port belonging to.....Electrical Installation fitted by Wm Broadway & Son Contract No..... When fitted.....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. NoHave plans been submitted and approved Yes System of Distribution two wire Voltage of supply for Lighting 110Heating..... 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 atrip 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 polenegative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing..... Have certificates oftest for machines under 100 kw. been supplied Yes and the results found as per rule Yes Are the lubricating arrangements and the constructionof the generators as per rule Yes Position of Generators Engine room starboard side 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 metalliccontact Yes Switchboards, where are main switchboards placed Engine room starboard side near generatoron forward bulkheadare they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steamand oil Yes, if situated near unprotected combustible material state distance from same horizontally..... and vertically....., what insulationmaterial is used for the panels "Lindolux", if of synthetic insulating material is it an Approved Type Yes, if ofsemi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule..... Is the frame effectually earthed YesIs the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fusesto 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, pushbreak knife switches & double pole fuses

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and for each outgoing circuit Double pole, push break knife switches & double pole fuses.

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Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard oneammeters one voltmeters..... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to theequaliser connection..... Earth Testing, state means provided Lamps coupled to earth via switches & fusesSwitches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled asper 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 YesCables, 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 12, are the ends of all cables having a sectional area of 0.04square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends.....

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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	1	45	110	41	500	Steam engine		
EMERGENCY ...								
ROTARY TRANSFORMER								

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	1	4.5	110	41	500	Steam engine		
EMERGENCY								
ROTARY TRANSFORMER								

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA- TED 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	45	1	7/064	41	46	36'	VIR	LC.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

[illegible]

WIRELESS	1	7/036	15	24	170'	VIR	L & A
NAVIGATION LIGHTS	1	3/036	4	10	160'	"	"
LIGHTING AND HEATING	1	7/044	10	31	160'	"	"
Accommodation							
Engine 2 boiler room direct from main switch board.							

[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.

W. BROADY & SONS
ENGINEERS,
HULL.

Electrical Engineers.

Date 18. 8. 43

COMPASSES

Minimum distance between electric generators or motors and standard compass

63'

Minimum distance between electric generators or motors and steering compass

68'

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) LTD

Builder's Signature.

Date 20 Aug 1943

Governing Director

Is this installation a duplicate of a previous case

Yes

If so, state name of vessel

"EMPIRE BEN"

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

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 was installed under special survey and in accordance with the approved plans and end with the specification. The material 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
R. J. G.

14/9/43

Total Capacity of Generators 4.5 Kilowatts.

The amount of Fee ... £ 3 : 0 : 15

25% for spec

Travelling Expenses (if any) £ : :

When applied for.

6 SEP 1943

When received.

19

W. H. Cornwell

Surveyor to Lloyd's Register of Shipping.

FRI. 17 SEP 1943

Committee's Minute

Assigned

see minute
on I.E. Rpl.



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Lloyd's Register
Foundation