

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

17 APR 1944

Received at London Office

Date of writing Report 29-3-44 When handed in at Local Office 15-4-44 Port of Middlesbrough

No. in Survey held at Haverton Hill on Tees Date, First Survey 4-1-44 Last Survey 23-3-44  
Reg. Book. (Number of Visits 2)

37400 on the S/S "EMPIRE LAW" Tons { Gross 8128 Net 4507

Built at Haverton Hill on Tees By whom built Furness Shipbuilding Co. Ltd. Yard No. 357 When built 1944

Owners The Ministry of War Transport. Port belonging to Middlesbrough

Electrical Installation fitted by Furness Shipbuilding Co. Ltd. Contract No. 357 When fitted 1944

Is vessel fitted for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. No

Have plans been submitted and approved Yes System of Distribution Two-Wire insulated Voltage of supply for Lighting 110

Heating - Power 110 Direct or Alternating Current, Lighting Yes Power Yes 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. No, 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. No 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 on generator flat aft of L.P. Boilers

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 on generator flat aft of L.P. Boilers

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. Epoxy "Sindergo" 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. a double-pole single

throw quick-break Ruffe switch and double pole cartridge fuse. a double-pole

double-throw Ruffe switch for supplying D.C. from either generator

and for each outgoing circuit. a double-pole double-throw quick-break Ruffe switch and double

pole cartridge type fuse

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

ammeters. Two 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 E. lamps coupled to E through two 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. 7.66 V. 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. Yes





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.

FURNESS SHIPBUILDING CO. LIMITED

*Whitely*

Electrical Engineer

Date 7-4-44

COMPASSES.

Minimum distance between electric generators or motors and standard compass 15'

Minimum distance between electric generators or motors and steering compass 13'

The nearest cables to the compasses are as follows:—

A cable carrying 14 Ampères 7 feet from standard compass on the feet from steering compass.

A cable carrying 14 Ampères on the feet from standard compass 7 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 440

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted 440

The maximum deviation due to electric currents was found to be 1/2 degrees on every course in the case of the standard compass, and 1/2 degrees on every course in the case of the steering compass.

*J. W. Ball*

Builder's Signature

Date April 7 1944

Is this installation a duplicate of a previous case 440 If so, state name of vessel S/S "Empire Bounty"

Plans. Are approved plans forwarded herewith 440 If not, state date of approval 28-9-43

Certificates. Are certificates of test for ~~motors engaged on essential services and~~ generators forwarded herewith 440

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

The electrical equipment of this vessel has been installed under special survey in accordance with the approved plans and the Ministry of Shipping specification and amendments thereto. The materials used are of good quality and design and the workmanship is good. On completion the equipment was tested under load with satisfactory results and the insulation resistance of each circuit was measured and found good. This equipment is in my opinion suitable for a classed vessel.

Notes

Plan

18.4.44

Total Capacity of Generators (2x30) 60 Kilowatts.

The amount of Fee ...	£28. 10. 0.	When applied for, 7-4-19.44
<i>Specification</i>	4. 2. 6	
Travelling Expenses (if any) £	:	When received, .....19.....

*D. D. Ward*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THURS 27 APR 1944

Assigned

*See for machinery etc*

500,430.—Transfer. (MADE AND PRINTED IN ENGLAND.)  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

