

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

27 SEP 1943

Received at London Office

Date of writing Report 15.9.43 When handed in at Local Office 23/9/43 Port of Belfast

No. in Survey held at Belfast Date, First Survey 13 May 1943 Last Survey 16 Sept 1943  
Reg. Book. (Number of Visits 17)

on the M.V. "EMPIRE INDUSTRY" Tons Gross Net

Built at Belfast By whom built Harland &amp; Wolff Ltd Yard No. 1159 When built 1943

Owners M.O.W.T. Port belonging to

Electrical Installation fitted by Harland &amp; Wolff Ltd Contract No. 1159 When fitted 1943

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

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

Heating Power 110 Direct or Alternating Current, Lighting DC Power DC 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 None 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 Starboard side of Motor 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 On Platform starboard side of Motor Room

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 Sundag, 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 300 Amp Double Pole

Change over switch with 250 amp Fuse on each pole

and for each outgoing circuit Double pole switch and Double pole fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 3

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 Two earth lamps with two way and off switch

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 No, if otherwise than as per Rule are they of an approved type Yes, Copper Covered

state maximum fall of pressure between bus bars and any point under maximum load 5.64, 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 None



PARTICULARS OF GENERATING PLANT.

## GENERATOR CABLES.

### MAIN DISTRIBUTION CABLES.

LIGHTING AND HEATING, ETC., CABLES.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
TURNING MOTOR	1	10.0	1	0.0400	20.0	104	90	MINSBAG INSULATED	COPPER COVERED
WORKSHOP MOTOR	1	2.0	1	0.0100	26.0	35	190	Do	Do Do
FUEL OIL PURIFIER	1	3.0	1	0.0225	26.0	60	30	Do	Do Do
LUB OIL PURIFIER	1	2.5	1	0.0145	21.3	45	40	Do	Do Do
SUPPLY FAN No 1 ACCOMM <sup>N</sup> MIDDISHIPS	1	4.0	1	0.0225	35.0	60	70	Do	Do Do
Do No 2 ACCOMM <sup>N</sup> AFT.	1	4.0	1	0.0225	35.0	60	230	Do	Do Do
FUEL OIL PUMP ( STAND BY)	1	1.75	1	0.0100	15.9	35	50	Do	Do Do



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 to the maker's works as specified in the Rules.

The foregoing is a correct description.



Electrical Engineers.

Date 16.9.43.

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass 50 ft

Minimum distance between electric generators or motors and steering compass 45 ft

The nearest cables to the compasses are as follows:—

A cable carrying 0.13 Ampères ON feet from standard compass 8 feet from steering compass.

A cable carrying 0.12 Ampères 8 feet from standard compass ON feet from steering compass.

A cable carrying 24 Ampères 8 feet from standard compass 10 feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power Yes and calibrated with D/G on and off.

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 16-9-43.

Is this installation a duplicate of a previous case? Yes. State name of vessel Empire Bonaventure

Plans. Are approved plans forwarded herewith? Yes. If not, state date of approval

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 the vessel has been installed under special survey and in accordance with the approved plans and specification. The installation has been tested under full working conditions and found satisfactory. The materials and workmanship are good.

Noted  
L.H.  
29/9/43.

Total Capacity of Generators 50 Kilowatts.

The amount of Fee ... £ 27 : 10 : 0 When applied for, 24/9/1943  
Specification + 25% 6. 17. 6

Travelling Expenses (if any) £ 22 : 18 : 4 When received, 19.....  
{ On Belfast 11. 9. 2  
On Liverpool

Surveyor to Lloyd's Register of Shipping.  
K. Shaw.

TUES. 5 OCT 1943

Committee's Minute

Assigned See minute on J.E. Rpt.