

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

DEC 29 1937

Date of writing Report 18. 12. 1937 When handed in at Local Office 27. 12. 1937 Port of Glasgow.
 No. in Survey held at Port Glasgow & Glasgow. Date, First Survey 20. 10. 37 Last Survey 20 - 12 - 1937.
 Reg. Book. 26999 on the S.S. "IRON CHIEFTAIN" (Number of Visits 9)
 Built at Port Glasgow. By whom built Lithgows Ltd Yard No. 903 When built 1937.
 Owners Broken Hill Proprietary Co. Ltd Port belonging to Melbourne.
 Electric Light Installation fitted by W. Klein Goodfellows etc. Ltd Contract No. 903 When fitted 1937.
 Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Two wire
 Pressure of supply for Lighting 220 volts, Heating 220 volts, Power 220 volts.

Direct or Alternating Current, Lighting Direct Power Direct.

If alternating current system, state frequency of periods per second —

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes.

Generators, do they comply with the requirements regarding temperature rise Yes, are they compound wound Yes
 are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel No., is an adjustable regulating resistance fitted in series with each shunt field Yes

Have certificates of test results for machines under 100 kw. been submitted and approved Yes Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing —

Are all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes

Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators In Engine Room., is the ventilation in way of the generators satisfactory Yes are they clear of all inflammable material Yes if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the generators — and —, are the generators protected from mechanical injury and damage from water, steam or oil Yes, are their axes of rotation fore and aft Yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generators in metallic contact Yes

Main Switch Boards, where placed In Engine Room near generators.
 If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard —

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam or oil Yes, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards — and —, are they constructed wholly of durable, non-ignitable non-absorbent materials Yes, is all insulation of high dielectric strength and of permanently high insulation resistance Yes

is it of an approved type Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework Yes, is the non-hygroscopic insulating material of an approved type Yes, and is the frame effectively earthed Yes Are the fittings as per Rule regarding:— spacing or shielding of live parts Yes

accessibility of all parts Yes, absence of fuses on back of board Yes, temperature rise of omnibus bars Yes, individual fuses to voltmeter, pilot or earth lamp Yes, are moving parts of switches alive in the "off" position No are all screws and nuts securing connections effectively locked Yes are any fuses fitted on the live side of switches No

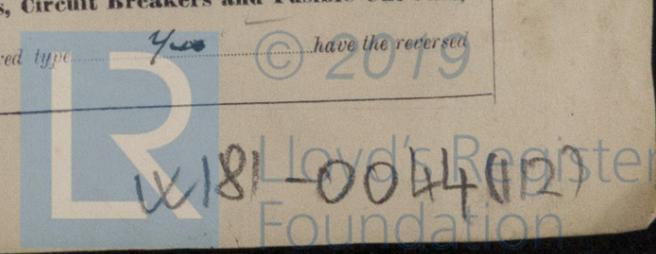
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches D.P. Circuit Breaker with 1/2 trips for each generator. D.P. % switch & D.P. fuses for each outgoing circuit.

Are turbine driven generators fitted with emergency trip switch as per rule — Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material Yes. Instruments on main switchboard 2 ammeters 2

voltmeters — synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection —

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Lead Ramps

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes are the fusible cutouts of an approved type Yes have the reverse —



All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

FOR & ON BEHALF OF
W. MUIR GOODFELLOW & COY LTD.

Electrical Engineers.

Date 21/12/37

W. M. Goodfellow Director

COMPASSES.

Distance between electric generators or motors and standard compass 190 feet

Distance between electric generators or motors and steering compass 190 feet

The nearest cables to the compasses are as follows:—

A cable carrying 3 Ampères 10 feet from standard compass 6 feet from steering compass.

A cable carrying 1/4 Ampères led into feet from standard compass led into 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 1/2 degrees on any course in the case of the standard compass, and 1/2 degrees on any course in the case of the steering compass.

LITHGOWS LIMITED,

John Macfarlane Secretary

Builder's Signature.

Date 23/12/37

Is this installation a duplicate of a previous case Yes If so, state name of vessel SS 'IRON KNIGHT'

General Remarks (State quality of workmanship, opinions as to class, &c.) The electrical equipment of this vessel has been fitted on board under special survey, tested under full working conditions & found satisfactory. The materials and workmanship are good.

27/12/37

W. M. Goodfellow
3/1/38

Total Capacity of Generators 140 Kilowatts.

The amount of Fee ... £ 36 : 10 : -

When applied for. *at G. G. G.*

Travelling Expenses (if any) £ - : - : -

When received. 25.12.37

R. I. Trenchison
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 28 DEC 1937

Assigned SEE ACCOMPANYING MACHINERY REPORT.

750,938.—Transfer. The Surveyors are requested not to write on or below this space for Committee's Minute.

