

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office... 11 NOV 1925

Date of writing Report 1-10-1925 When handed in at Local Office 2-11-1925 Port of GLASGOW.

No. in Survey held at GLASGOW. Date, First Survey 6th July Last Survey 5th Oct 1925
Reg. Book. S.S. "LLANDOVERY CASTLE" (Number of Visits... 10)25962. on the Tons { Gross 10609
Net

Built at GLASGOW. By whom built MESSRS BARCLAY CURRIE Yard No. 606 When built 1925.

Owners UNION CASTLE MAIL S.S. CO LTD Port belonging to

Electric Light Installation fitted by MESSRS ARCHD WATSON & CO Contract No. 606 When fitted 1925

System of Distribution Double wire distribution system

Pressure of supply for Lighting 220 volts, Heating 220 volts, Power 220 volts.

Direct or Alternating Current, Lighting Direct current Power Direct current.

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 overload 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 Yes, is an adjustable regulating resistance fitted in

series with each shunt field Yes

Are all terminals accessible and clearly marked Yes, are they so spaced or shielded that they cannot be accidentally earthed,

or short circuited Yes Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators Dynamo flat engine room stern

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 axis 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, metallic half coupling

Main Switch Boards, where placed In dynamo Platform aft bulkhead

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, incombustible non-absorbent materials Yes, is all insulation of high dielectric strength and of

permanently high insulation resistance Yes, if semi-insulating material is used, are all conducting parts connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework Yes, mica insulation, and is the

frame effectively earthed Yes Are the following fittings as per Rule, viz.:— spacing or shielding of live parts

Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, proportion of omnibus

bars Yes, individual fuses to voltmeter, pilot or earth lamp Yes, connections of switches Yes

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches each generator has

D.P. switch — D.P. circuit breaker & equalising switch interlocked with breaker. Each outgoing circuit has S.P. CO knife switch & 2 replacement fuses (board has bus bars for emergency use)

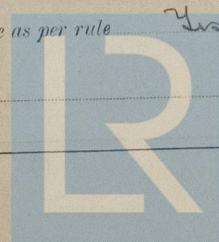
Instruments on main switchboard 3 ammeters 3 voltmeters 3 synchronising devices for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system 2 earth testing

lamps with switches & fuses

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes

Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes



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Insulation of Cables, state type of cables, single or twin single are the cables insulated and protected as per Tables III or IV of the Rules Yes
Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 5 Bars
Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 square inch and above provided with soldering sockets Yes

Paper Insulated Cables, If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound Yes

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage Yes in every case

Support and Protection of Cables, state how the cables are supported and protected Cables in twin ducts etc. led through beams & clipped direct to ducts. Cables in accommodation clipped to grounds or wooden bulkheads
If cables are run in wood casings, are the casings and caps secured by screws Yes, are the cap screws of brass Yes, are the cables run in separate grooves Yes. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VI Yes.

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements Yes
Joints in Cables, state if any, and how made, insulated, and protected No joints

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands WT stuffing glands for bulkheads & W.T. gate pipes for ducts.

Bushes in Beams and Non-watertight Positions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed Yes state the material of which the bushes are made Red fire

Earthing Connections, state what earthing connections are fitted and their respective sectional areas are their connections made as per Rule

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule Yes

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven Emergency dynamo driven by heavy oil fuel engine, located situated at top of engine room. Emergency dynamo controlled D.P. circuit breaker, and board fed from main sets if required.

Navigation Lamps, are these separately wired Yes, controlled by separate switch and separate fuses Yes
are the fuses double pole Yes, are the switches and fuses grouped in a position accessible only to the officers on watch Yes
has each navigation lamp an automatic indicator as per Rule Yes, are separate screens provided for the use of oil and electric side lights Yes
are separate oil lanterns provided for the mast head lights and side lights Yes

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight Yes
are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected heavy cast iron cargo fittings with heavy C.I. guard.
are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected how are the cables led

where are the controlling switches situated Yes

Searchlight Lamps, No. of 1, whether fixed or portable 1, are their fittings as per Rule Yes

Are Lamps, other than searchlight lamps, No. of 1, are their live parts insulated from the frame or case Yes, are their fittings as per Rule Yes

Motors, are their working parts readily accessible Yes, are the coils self-contained and readily removable for replacement Yes
are the brushes, brush holders, terminals and lubricating arrangements as per Rule Yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material Yes
are they protected from mechanical injury and damage from water, steam or oil Yes are their axis of rotation fore and aft Yes
if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type Yes
if not of this type, state distance of the combustible material horizontally or vertically above the motors Yes

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed as per Rule Yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule Yes

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings Yes

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office Yes

PARTICULARS OF GENERATING PLANT.								
DESCRIPTION OF GENERATOR.	No. of	RATED AT			Revs. per Min.	DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.			Fuel Used.	Flash Point of Fuel.
MAIN	3	60 BR.	220	273	450	Compound internal combustion engine	—	—
AUXILIARY	—	—	—	—	—	—	—	—
EMERGENCY	1	36	220	163	325	Allen heavy oil engine	89 a.g. "shell"	above 150°F.
ROTARY TRANSFORMER	—	—	—	—	—	—	—	—

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
—	MAIN GENERATOR...	2	4000	61	.093	273	95	V.R.	L.C.A.B.
—	AUXILIARY GENERATOR	—	—	—	—	—	—	—	—
—	EMERGENCY GENERATOR	2	2000	37	.083	163	40	V.R.	L.C.
—	ROTARY TRANSFORMER...	—	—	—	—	—	—	—	—
—	AUXILIARY SWITCHBOARDS...	—	—	—	—	—	—	—	—
—	ENGINE ROOM	—	—	—	—	—	—	—	—
—	BOILER ROOM	1 (line)	.0225	7	.064	20.0	275	V.R.	L.C.A.B.
—	Cargo Circuit	2	.0225	7	.064	22.2	500	"	Lead covered.
—	Saloon - upper	2	.0225	7	.064	36.4	300	"	"
—	Fore - upper	2	.0100	7	.044	13.0	600	"	"
—	Stow - aft	2	.0100	7	.044	10.0	310	"	"
—	Galley - forward	2	.0100	7	.044	18.2	387	"	"
—	Emergency lighting	2	2000	37	.083	1630	310	"	"
—	Miller deck light (100)	2	.0100	7	.044	25.0	300	"	"
—	Miller Deck stand (100)	2	.0100	7	.044	25.0	290	"	"
—	Saloon - upper deck	2	.0225	7	.064	22.0	600	"	"
—	5th Class	2	.0070	7	.036	21.5	300	"	"
—	Cooling gear	2	.0000	19	.083	72.2	80	"	"
—	Charging Board	2	.0070	7	.036	60.0	42	"	L.C.
—	WIRELESS	2	.0070	7	.036	14.0	340	"	"
—	SEARCHLIGHT	—	—	—	—	—	—	—	—
—	MASTHEAD LIGHT...	2	.0015	1	.044	36	470	V.R.	L.C.
—	SIDE LIGHTS...	2	.0015	1	.044	36	68	"	"
—	COMPASS LIGHTS...	2	.0015	1	.044	14	30	"	"
—	POOP LIGHTS	—	—	—	—	—	—	—	—
—	CARGO LIGHTS	2	.0015	1	.044	32	57	"	"
—	ARC LAMPS	—	—	—	—	—	—	—	—
—	HEATERS	—	—	—	—	—	—	—	—

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
—	BALLAST PUMP	—	—	—	—	—	—	—	—
—	MAIN BILGE LINE PUMPS	—	—	—	—	—	—	—	—
—	GENERAL SERVICE PUMP	—	—	—	—	—	—	—	—
—	EMERGENCY BILGE PUMP	1	.0000	19	.083	98.2	367	V.R.	L.C.A.B.
—	SANITARY PUMP	—	—	—	—	—	—	—	—
—	CIRC. SEA WATER PUMPS	—	—	—	—	—	—	—	—
—	CIRC. FRESH WATER PUMPS	—	—	—	—	—	—	—	—
—	AIR COMPRESSOR	—	—	—	—	—	—	—	—
—	FRESH WATER PUMP	—	—	—	—	—	—	—	—
—	ENGINE TURNING GEAR	2	.0225	7	.064	36.4	170	V.R.	L.C.A.B.
—	ENGINE REVERSING GEAR	—	—	—	—	—	—	—	—
—	LUBRICATING OIL PUMPS	—	—	—	—	—	—	—	—
—	OIL FUEL TRANSFER PUMP	—	—	—	—	—	—	—	—
—	WINDLASS	—	—	—	—	—	—	—	—
—	WINCHES, FORWARD	—	—	—	—	—	—	—	—
—	WINCHES, AFT	—	—	—	—	—	—	—	—
—	STEERING GEAR	—	—	—	—	—	—	—	—
—	WORKSHOP MOTOR	1	.0070	7	.036	12.8	130	V.R.	L.C.A.B.
—	VENTILATING FANS	13	.0070	7	.036	18.2	90	"	"
—	" " " " " "	13	.0070	7	.036	12.0 (2)	360 (2)	"	L.C.
—	Deck lights	2	.0100	7	.044	22.0	220	"	"
—	Boat winches 5 HP	2	.0070	7	.036	18.2	210	"	"
—	" " 7.5 HP	2	.0100	7	.044	27.3	130	"	"
—	" " 15 HP	2	.0225	7	.064	44.0	350	"	"
—	C.S. fans	3	.0100	7	.044	22.0	375	"	"

All Conductors are of annealed copper conforming to British Standard Specification No. 7.

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

The foregoing is a correct description of the installation.

D. Dundas
J.M.P.

DIRECTOR

Electrical Engineers.

Date 27-10-25

COMPASSES.

Distance between electric generators or motors and standard compass 180

Distance between electric generators or motors and steering compass 170

The nearest cables to the compasses are as follows:—

A cable carrying 12 Ampères 7 feet from standard compass 4 feet from steering compass.

A cable carrying 14 Ampères in feet from standard compass 6 feet from steering compass.

A cable carrying 14 Ampères 6 feet from standard compass in 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 any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

FOR BARCLAY, CURLE, & CO., LTD

H. J. Curley

SECRETARY

Builder's Signature.

Date 28th Oct 25

Is this installation a duplicate of a previous case no. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

This installation has been fitted on board under special survey. Tested under full working conditions and found satisfactory. The workmanship was found to be good and sound.

Elec. Light.

20. 9. 25

Total Capacity of Generators 216 Kilowatts

The amount of Fee ... £ 36-18-0 : When applied for, 20. 9. 25

Travelling Expenses (if any) £ : : When received, 28. 10. 25

J. S. Rankin
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 10 NOV 1925

Assigned

Elec. Light



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