

Rpt. 13.

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

No. 8695

Date of writing Report 7-6-1929 When handed in at Local Office

Received at London Office 10 JUN 1929

Port of Dundee

No. in Survey held at Dundee

Date, First Survey 22-3-29 Last Survey 28-6-1929

Reg. Book.

on the Ferry Paddle Steamer "B. L. NOIRN"

(Number of Visits FIVE)

Tons { Gross 395
Net 171

Built at Dundee

By whom built

Caledon S. & E. Co.

Yard No. 330

When built 1929

Owners Dundee Harbour Trust

Port belonging to

Dundee

Electric Light Installation fitted by

Caledon S. & E. Co.

Contract No. 330

When fitted 1929

Is the Vessel fitted for carrying Petroleum in bulk No

System of Distribution

Two Wire System

Pressure of supply for Lighting 110

volts, Heating

volts, Power

volts.

Direct or Alternating Current, Lighting

Direct

Power

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 rating

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

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

Bottom

Platform

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

Yes

, 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 Board, where placed

Control

Platform

Engine

Room

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

20" HORIZONTALLY

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

, 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

and is the frame effectively earthed

Yes

Are the fittings as per Rule regarding:— spacing or shielding of live parts

, 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

1-50 Amp. D.P. Q.B. Switch, 2-50 Amp Fuses. 20-5 Amp Q.B. S.P. Switches. 40-5 Amp Fuses.

Instruments on main switchboard

ammeters

voltmeters

synchronising device for paralleling purposes.

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

2-30 watt

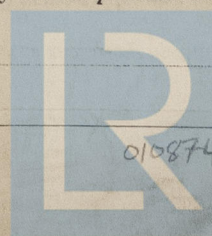
M.F. Lamps in Parallel with centre Point Earthed.

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

Yes

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

Yes



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Foundation

10 JUN 1929

Cables: Single, twin, concentric, or multicore Single are the cables insulated and protected as per Tables IV or V of the Rules IV.

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 2.5 V.P.

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 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.

Support and Protection of Cables, state how the cables are supported and protected L.C. clipped to wood bulkheads, L.C. clipped to perforated metal Tray in Engine & Boiler Rooms all with brass clips.
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 VIII 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 Yes.

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yes.

Bushes in Beams and Non-watertight Partitions, 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 Lead.

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

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 Yes.

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.

Secondary Batteries, are they constructed and fitted as per Rule 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 Guarded. are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected Yes, how are the cables led Yes, where are the controlling switches situated Yes.

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

Arc 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 axes 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 and Yes.

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

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

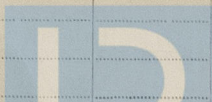
Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings Yes.

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				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN ...	1	7.	110.	64.	350	5" x 6" C. Chapman.			
AUXILIARY ...						Steam Engine			
EMERGENCY ...									
ROTARY TRANSFORMER									

GENERATOR, LIGHTING AND HEATING CONDUCTORS.									
DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR ...	1	.039	19	.032"	30	64.	40	Rubber	L.C.
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR...									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER { MOTOR									
GENERATOR...									
ENGINE ROOM...	1	.002	3	.029	2.2	7.8	50	Rubber	L.C.
BOILER ROOM...	1	.002	3	.029	1.8	7.8	60	"	"
AUXILIARY SWITCHBOARDS									
ACCOMMODATION ...	1	.002	3	.029	3.6	7.8	60.	Rubber	L.C.
WIRELESS									
SEARCHLIGHT									
MASTHEAD LIGHT									
SIDE LIGHTS	1	.002	3	.029	0.4	7.8	60	Rubber	L.C.
COMPASS LIGHTS	1	.002	3	.029	0.2	7.8	30	"	"
POOP LIGHTS									
CARGO LIGHTS									
ARC LAMPS									
HEATERS									

MOTOR CONDUCTORS.										
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS...										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR...										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP...										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR...										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										

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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.

THE CALEDON SHIPBUILDING & ENGINEERING CO. LTD

W. M. Gillanders

Electrical Engineers.

Date *5th June. 1929*

COMPASSES.

Distance between electric generators or motors and standard compass *✓*

Distance between electric generators or motors and steering compass

50 feet.

The nearest cables to the compasses are as follows:—

A cable carrying *2.7* Amperes *✓* feet from standard compass *6* feet from steering compass.

A cable carrying *0.2* Amperes *✓* feet from standard compass *1* foot from steering compass.

A cable carrying *0.2* Amperes *✓* feet from standard compass *1* foot from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power *✓* *es.*

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

The maximum deviation due to electric currents was found to be *✓* degrees on *✓* course in the case of the standard compass, and *✓* degrees on *✓* course in the case of the steering compass.

THE CALEDON SHIPBUILDING & ENGINEERING CO. LTD

Humphreys

Builder's Signature.

Date

GENERAL MANAGER.
SHIPBUILDING DEPT.

Is this installation a duplicate of a previous case *yes* If so, state name of vessel *P.S. "WILLIAM HIGH"*

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

This Installation has been fitted on board in a satisfactory manner & in accordance with the Rules. The materials and workmanship are of good description. The installation has been examined under full load conditions & found satisfactory.

*It is submitted that
this vessel is eligible for
THE RECORD. — Elec. Light*

Run

12.6.29

Total Capacity of Generators *7* Kilowatts.

The amount of Fee ... *✓* £ *7 : 0* :

When applied for,

4-6-1929

Travelling Expenses (if any) £ :

When received,

15-6-29

A. J. Bell

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Elec. Light



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