

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 1 SEP 1925

Date of writing Report 24th Aug 1925 When handed in at Local Office 10 Port of Dundee

No. in Survey held at Dundee Date, First Survey June 10th Last Survey 21st Aug 1925
(Number of Visits 13)

Reg. No. 37908 T.S.M.V. "ATHELCHIEF" Tons { Gross Net

Build at STANNERGATE YARD, DUNDEE by whom built CALEDON SHIPBUILDING & ENGINEERING CO. LTD., Yard No. 294 When built 1925

Owner BRITISH MOLASSES COMPANY, LONDON. Port belonging to LIVERPOOL.

Electric Fittings installed by CALEDON S. & E. Co. LTD., Contract No. When fitted 22/8/25.

System of Distribution DOUBLE WIRE SYSTEM

Pressure of supply for Lighting 110 volts, Heating 110 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 overload YES are they compound wound YES

are they over compounded 5 per cent. YES, if not compound wound state distance between each generator

When 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 NO

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 STARBOARD SIDE OF 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 axis of rotation fore and aft YES

Bearings, are the heliplates 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 WITHIN 6 FEET OF MAIN GENERATOR, STARBOARD SIDE OF 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' and

are they constructed wholly of durable, incombustible non-absorbent materials SLATE, 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 micamite and the slab similarly insulated from its framework YES, 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 1 1/2" x 1/4", individual fuses to voltmeter, pilot or earth lamp YES, connections of switches TERMINALS

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

D.P. TANDEM MAIN SWITCH AND SINGLE POLE ZED FUSES.

Instruments on main switchboard 2 ammeters 1 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

EARTH LAMPS FITTED FOR EACH DYNAMO.

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



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 1 VOLT

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 NONE

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 IN ENGINE ROOM CLIPPED TO SHIP STRUCTURE ON DECK IN GALV'D TUBING FITTED WITH W.T. DRAW IN BOXES.

If cables are run in wood casings, are the casings and caps secured by screws -, are the cap screws of brass -, are the cables run in separate grooves -. 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 WATERTIGHT GLANDS AND DECK PIPES FITTED.

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 CAST LEAD BUSHES.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas 37/064 s.w.g. fitted to ship STRUCTURE BY BOLT & NUT AND TERMINALS.

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

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 CHART ROOM

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 SEPARATE LAMPS ARE SUPPLIED FOR OIL.

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 NONE

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected GAS TIGHT

GUARDED FITTINGS IN PUMP ROOM., how are the cables led

LEAD COVERED CABLE IN GALVANIZED PIPE.

where are the controlling switches situated IN DISTRIBUTION BOX IN OFFICERS ACCOMMODATION AND MIDSHIP HOUSE.

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

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

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 IN ENGINE ROOM.

are they protected from mechanical injury and damage from water, steam or oil YES are their axis of rotation fore and aft ATHWARTSHIP

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 not near., if not of this type, state distance of the combustible material horizontally or vertically above the motors and

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				DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	1 at 18 & 1 at 10 KW.	110	163	330	Single Cylinder Engines		
AUXILIARY				91		coupled to compound		
EMERGENCY						wound generators.		
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. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	2	.2	37	.083	163 ✓	15	Rubber	Lead Armoured.
	AUXILIARY GENERATOR	2	.1	19	.083	91 ✓	20	"	" "
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM and BOILER ROOM	2	.0225	7	.064	25 ✓	75	"	" "
	WIRELESS	2	.0070	7	.036	11 ✓	230	"	" "
	SEARCHLIGHT	2	.0600	19	.064	55	800	"	" "
	MASTHEAD LIGHT...	2	.0030	3	.036	1 ea	250		
	SIDE LIGHTS	2	.0030	3	.036	1 ea	90 ea		
	COMPASS LIGHTS	6	.0020	3	.029	1/2 ea	30 ea		
	POOP LIGHTS	2	.0225	7	.064	24 ✓	90		
	CARGO LIGHTS	2	.0145	7	.052	12 ✓	200		
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	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								
	WORKSHOP MOTOR	1	.0225	7	.064	34	100	RUBBER	LEAD ARMOURED
	VENTILATING FANS								
	OIL PURIFIERS	2	.0070	7	.036	10	50 ea	"	" "

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

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

The foregoing is a correct description. YES

FOR THE CALEDON SHIPBUILDING & ENGINEERING CO. LTD.,

William M. Gillanders

Electrical Engineers.

Date *24th Aug 1925*

COMPASSES.

Distance between electric generators or motors and standard compass 300'

Distance between electric generators or motors and steering compass 290'

The nearest cables to the compasses are as follows:—

A cable carrying $\frac{1}{2}$ Ampères 8 feet from standard compass 6 feet from steering compass.

A cable carrying Ampères feet from standard compass 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 NIL degrees on ALL course in the case of the standard

compass, and NIL degrees on ALL course in the case of the steering compass.

Grant Poutney

Builder's Signature.

Date *24th August 1925,*

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 in accordance with the Rules. The materials and workmanship are sound & good, on completion it was tried under working conditions and found satisfactory in all respects.

It is submitted that this vessel is eligible for classification as ELEC. LIGHT. 22/8. 17/9/25.

Total Capacity of ~~Engines~~ 28 Kilowatts

The amount of Fee ... £ 21 : 10 :
Travelling Expenses (if any) £ 3 : 0 :
(due Glasgow)

When applied for, 19...
When received, 5. 9. 25

J. Craikin + J. Sellar

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Form 322—Transfer. (The Surveyor is requested not to write on or below this space for Committee's Minute)

