

16 MAY 1927

Rpt. 13.

No. 8594

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) Received at London Office 20 FEB 1927

Date of writing Report 22 - 2 - 1927 When handed in at Local Office 19 Port of London

No. in Survey held at London Date, First Survey 29 - 12 - 26 Last Survey 17 - 2 - 1927  
Reg. Book. (Number of Visits Six)

on the TWIN M/Y "ALETTA" Tons { Gross ✓  
Net ✓

Built at London By whom built Caldon S & B. Co. Ltd. Yard No. 308 When built 1927.

Owners Messrs Anglo Saxon Petroleum Co. Ltd. Port belonging to ✓

Electric Light Installation fitted by Messrs The Caldon S. & B. Co. Ltd. Contract No. 308 When fitted 1927.

System of Distribution Two wire Direct Current ✓

Pressure of supply for Lighting 110 volts, Heating 110 volts, Power 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 ✓

Generators, do they comply with the requirements regarding overload ✓, are they compound wound ✓

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

Where more than one generator is fitted are they arranged to run in parallel ✓, is an adjustable regulating resistance fitted in

series with each shunt field ✓

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

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

Position of Generators Port and Starboard wings of Engine Room.

is the ventilation in way of the generators satisfactory ✓, are they clear of all inflammable material ✓

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 ✓

are their axis of rotation fore and aft ✓

Earthing, are the bedplates and frames of the generating plant efficiently earthed ✓ are the prime movers and

their respective generators in metallic contact ✓

Main Switch Boards, where placed Starboard side of Forward Engine Room 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 ✓

are they protected from mechanical injury and damage from water, steam or oil ✓, 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 ✓, is all insulation of high dielectric strength and of

permanently high insulation resistance ✓, 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 ✓, and is the

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

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

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

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches. D. P. Change

our main switch & fuses.

Instruments on main switchboard 1 ammeters 2 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 Lamp testing

gear mounted on Switchboard

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

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



**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 nil

**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 In Salvomized 4" pipes for each pole with expansion joints and Salvomized perforated trays.

**Support and Protection of Cables**, state how the cables are supported and protected Salvomized clips and beam 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 VI Yes

**Refrigerated Chambers**, if lights are fitted, are the cables and fittings in accordance with the special requirements no lights fitted.

**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 Yes

**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 lead (cast).

**Earthing Connections**, state what earthing connections are fitted and their respective sectional areas Copper strip .25" x 6" Bull of vessel in two positions.

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, 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 no

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

in Salvomized tubing outside pump room.

where are the controlling switches situated in alleyway outside 1<sup>st</sup> Officers Room.

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

**Are Lamps**, other than searchlight lamps, No. of Yes, 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 and 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				DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ... ..	1	10 ✓	110	90	340	Single Cyd. Engine Forded Lub.		
AUXILIARY ... ..	1	10 ✓	110	90	340	Kromhout motor.		
EMERGENCY ... ..								
ROTARY TRANSFORMER								

## LIGHTING AND HEATING CONDUCTORS.

[illegible]

## 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 ...								
	SANITARY PUMP ... ..								
	CIRC. SEA WATER PUMPS ...								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR ... ..	1	0070 ✓	7	036	7.2	55 feet.	Rubber	Lead + Braided.
	FRESH WATER PUMP ... ..								
	ENGINE TURNING GEAR ...	2	0225 ✓	7	064	40	65 feet.	Rubber	Lead + Braided.
	ENGINE REVERSING GEAR ...								
	LUBRICATING OIL PUMPS ...	1	0070 ✓	7	036	20	10 feet.	Rubber.	Lead + Braided.
	OIL FUEL TRANSFER PUMP								
	WINDLASS ... ..								
	WINCHES, FORWARD ... ..								
	WINCHES, AFT ... ..								
	STEERING GEAR ... ..								
	WORKSHOP MOTOR ... ..								
	VENTILATING FANS ... ..								



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 R  
The foregoing is a correct description.

THE CALEDON SHIPBUILDING & ENGINEERING CO.

Electrical Engineers.

Date 22

### COMPASSES.

Distance between electric generators or motors and standard compass 100 feet  
Distance between electric generators or motors and steering compass 100 feet  
The nearest cables to the compasses are as follows:—  
A cable carrying 1 Ampères 7 feet from standard compass 6 feet from steering compass.  
A cable carrying 1 Ampères 7 feet from standard compass 6 feet from steering compass.  
A cable carrying 1 Ampères 7 feet from standard compass 6 feet from steering compass.  
Have the compasses been adjusted with and without the electric installation at work at full power.  
Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted.  
The maximum deviation due to electric currents was found to be degrees on course in the compass, and degrees on course in the case of the steering compass.

THE CALEDON SHIPBUILDING & ENGINEERING CO. LTD.

Humphreys

Builder's Signature.

Date 22

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, with the exception of the generator, and motor lights in Engine room, has been fitted on board in accordance with the Rules. The materials & workmanship are sound. The vessel has proceeded to Amsterdam where the installation will be completed. The Amsterdam Surveyor has been advised.

The generator, motor and lights in Engine room have been fitted. The whole tested under full working conditions and good.

F. W. Beaman

Total Capacity of Generators 20 Kilowatts

It is submitted that this vessel is eligible for THE RECORD. Elec. light.

The amount of Fee £ 17 : 10 : When applied for, 23-2-1927

Travelling Expenses (if any) £ 2 : 4 : When received, 30/4/27

F. W. Beaman 18/5/27  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI, 20 MAY 1927

Assigned

Elec. light

Im. 3.22.—Transfer.

(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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