

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

11 MAR 1931

Date of writing Report

19

When handed in at Local Office

-9 MAR. 1931

Port of

Liverpool

No. in Survey held at

Liverpool

Date, First Survey

1st Oct

Last Survey

3rd March 1931

Reg. Book.

(Number of Visits... 24)

89440 on the "ATHELBEACH".

Tons { Gross 6450  
Net

Built at

BIRKENHEAD.

By whom built

CAMMELL LAIRO &amp; CO.

Yard No. 973

When built 1930

Owners

UNITED MOLASSES CO. LTD

Port belonging to

Electric Light Installation fitted by

THE SUNDERLAND FORGE &amp; ENG. CO.

Contract No. 973

When fitted 1930

Is the Vessel fitted for carrying Petroleum in bulk

YES.

System of Distribution

DOUBLE WIRE

Pressure of supply for Lighting

110

volts, Heating

-

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

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

No

, is an adjustable regulating resistance fitted in

series with each shunt field

YES.

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

MAIN 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

-

-

, 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

MAIN 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

-

-

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

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

DOUBLE POLE

CIRCUIT BREAKER FOR EACH GENERATOR AND DOUBLE-POLE CHANGE-OVER

SWITCHES AND FUSES AND DOUBLE POLE FUSES FOR EACH OUTGOING CIRCUIT.

Instruments on main switchboard

2

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

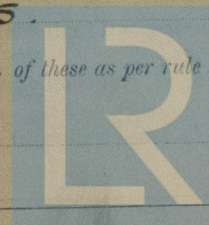
LAMP, SWITCH &amp; FUSE ON EACH POLE CONNECTED TO EARTH.

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.



© 2020

Lloyd's Register  
Foundation

W334-0032 1/2



**Cables:** Single, twin, concentric, or multicore *SINGLE TWIN & MULTICORE* are the cables insulated and protected as per Tables IV or V of the Rules *YES*.

**Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load *5.0*.

**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 *—*.

**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 *LEAD COVERED ARMORED & BRAIDED IN ENGINE ROOM SUPPORTED BY GALV. IRON CLIPS. ACCOMMODATION — LEAD COVERED & BRAIDED SUPPORTED BY BRASS CLIPS.*  
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 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 *NONE MADE*.

**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 *FIBRE & LEAD*.

**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 *—*.

**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 *—*, are any fittings placed in spaces where inflammable or explosive dust or fumes are liable to be present, if so, how are they protected *SPECIAL GASTIGHT PUMP ROOM FITTINGS IN GALV. IRON GASTIGHT PIPE*, how are the cables led *—*, where are the controlling switches situated *OUTSIDE PUMP ROOM*.

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

**Are 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 *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 *—*, 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 and fitted as per Rule *YES*.

**Lighting Conductors,** where lightning conductors are required, are these fitted as per Rule *—*.

**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	25	110	227	400	ENGINES BY BELISS & MORCOM			
AUXILIARY ... ..	-								
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	.15	37	.072	227.2	246	75	VARN. CAMBRIC	L.C. & BRAIDED
EQUALISER CONNECTIONS ... ..	-								
AUXILIARY GENERATOR ... ..	-								
EMERGENCY GENERATOR ... ..	-								
ROTARY TRANSFORMER } MOTOR	-								
GENERATOR ... ..	-								
ENGINE ROOM ... ..	1	.045	7	.052	32	37	75	V.I.R.	L.C. & BRAIDED
BOILER ROOM ... ..									
AUXILIARY SWITCHBOARDS ... ..									
GYRO PILOT.	1	.01	7	.044		31	660	V.I.R.	L.C. & BRAIDED
SALOON ACCOMMODATION	1	.04	19	.052	36.5	64	660	V.I.R.	L.C. & BRAIDED
FORD. ACCOMMODATION	1	.045	7	.052	12.9	37	920	V.I.R.	L.C. & BRAIDED
DET. ACCOMMODATION	1	.045	7	.052	27.5	37	220	V.I.R.	L.C. & BRAIDED
NAVIGATION.	1	.045	7	.052	10.5	37	675	V.I.R.	L.C. & BRAIDED
ACCOMMODATION ... ..									



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.

P. PRO THE SUNDERLAND FORGE & ENGINEERING CO. LTD.

Electrical Engineers.

Date Jan. 8<sup>th</sup> 1931

#### COMPASSES.

Distance between electric generators or motors and standard compass 184

Distance between electric generators or motors and steering compass 178

The nearest cables to the compasses are as follows:—

A cable carrying 10.5 Ampères 10 feet from standard compass 6 feet from steering compass.

A cable carrying .38 Ampères LED/NTD 8 feet from standard compass 8 feet from steering compass.

A cable carrying .38 Ampères 8 feet from standard compass LED/NTD 8 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° E degrees on all courses N-S.W by W course in the case of the standard compass, and 1 1/2° W degrees on all courses S.W-W by N. course in the case of the steering compass.

CAMMELL LAIRD AND COMPANY LIMITED.

J. W. Laird

Builder's Signature.

Date 9-FEB 1931

SECRETARY.

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 under special survey and is in accordance with the Rules. It has been examined under full working conditions & found satisfactory, and is eligible in my opinion for record of 'Elec Light' in Register book.

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

Electric Light  
J. W. Laird  
10/3/31

Total Capacity of Generators 50 Kilowatts.

The amount of Fee ... £ 27 : 10 : 0

When applied for,

10 MAR 1931

When received,

18.3.31

Travelling Expenses (if any) £ :

J. S. Milton

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

LIVERPOOL

10 MAR 1931

Assigned

Electric Light



© 2020

Lloyd's Register Foundation