

Rpt. 13.

No. 46631

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

19 MAY 1927

Date of writing Report

6.5.1927 When handed in at Local Office 16.5.1927 Port of GLASGOW.

No. in Survey held at
Reg. Book.

87969 on the

GLASGOW.

Date, First Survey

2nd Dec 1926

Last Survey

5th May 1927

(Number of Visits 17)

S.S. "AYELONA"

Tons { Gross 12857

Net

Built at CLYDEBANK.

By whom built MESSRS J. BROWN & CO

Yard No. 515

When built 1927.

Owners

THE BLUE STAR LINE LTD.

Port belonging to

Electric Light Installation fitted by MESSRS JOHN BROWN & CO LTD Contract No. 515

When fitted 1927

System of Distribution TWO WIRE, INSULATED

Pressure of supply for Lighting 220

volts, Heating 220

volts, Power 220

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

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

STARBOARD SIDE OF ENGINE ROOM (FLOOR LEVEL)

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 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

Main Switch Boards, where placed MAIN SWITCHBOARD:- IN ENGINE ROOM; REFRIG. SWITCHBOARD:- IN REFRIG. ENGINE ROOM;

EMERGENCY SWITCHBOARD:- IN EMERGENCY DYN. 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, 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, and is the frame effectively earthed YES

Are the following fittings as per Rule, viz.:— spacing or shielding of live parts YES

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

GENERATORS:- 1000 AMP, T.P. SALFORD CIRCUIT BREAKER WITH 2% COILS, TIME LAGS & ONE POLARISED REVERSE & MAG. BLOWOUT, MIDDLE POLE ARRANGED

FOR EQUALISING SWITCH. OUTGOING CIRCUITS:- S.P. SWITCHES & D.P. FUSES.

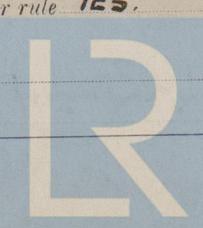
Instruments on main switchboard 5 ammeters 2 voltmeters VOLTMETER & PLUGS synchronising device for paralleling purposes.

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

SERIES WITH SWITCH FOR EACH LAMP, AND WIRE BETWEEN LAMPS CONNECTED TO EARTH THROUGH A SWITCH

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



© 2020

Lloyd's Register
Foundation
W334-0167 1/2

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 insulating between legs of ship and point of installation under working load **7.2 VOLTS TO FARTHEST LIGHT.**

Cable Sockets and other connections, are the ends of all cables having a section of **100 square mm** 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 **NO**

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 **MAIN CABLES ARE LEAD COVERED & BRAIDED RUN ON PERFORATED STEEL PLATING AND SECURED BY CLIPS. CABLES IN MACHINERY SPACES ARE LEAD COVERED & BRAIDED RUN AND SECURED AS ABOVE. CABLES IN PUBLIC ROOMS ARE BRAIDED ONLY AND RUN IN WOOD CASING & CONDUIT. CABLES PASSING OVER HEATER NECK IN CONDUIT ARE LEAD COVERED & TARRED JUTE SERVED.**

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 **NONE.**

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**

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 **AN EMERGENCY DYNAPCO IS FITTED ON "D" DECK DIRECT COUPLED TO A PETROL PARAFFIN ENGINE. EMERGENCY SWITCHBOARD SUPPLIES LIGHTING THROUGHOUT THE SHIP, EMERGENCY BOAT LIGHTS CONTROLLED FROM BRIDGE, EMERGENCY BILGE PUMP & WIRELESS.**

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

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

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

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 **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 they enclosed, pipe-ventilated, forced draught, built on fire proof type **NO**, 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

Ship 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 **NO**

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office **NO**

PARTICULARS OF GENERATING PLANT							
DESCRIPTION OF GENERATOR.	No. of	RATED AT			WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE		
		Kilowatts.	Volts.	Ampères.	Revs. per Min.	DRIVEN BY:	Fuel Used.
MAIN	2	200	220	910	375	COMPOUND ENG FORCED LUB ENGINE	
AUXILIARY	—	—	—	—	—	STM.	
EMERGENCY	1	25	220	114	800	PETROL PARAFFIN. ENGINE	
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.
MAIN GENERATOR	5	74350	91	103	910	100	RUBBER	LEAD COVERED & BRAIDED.
AUXILIARY GENERATOR	2	14780	37	072	114	20	"	"
EMERGENCY GENERATOR	2	10462	7	052	22.8	20	"	"
ROTARY TRANSFORMER	—	—	—	—	—	—	—	—
AUXILIARY SWITCHBOARD	2	30240	37	103	240	120	"	LEAD COVERED, ARM & BRAIDED.
E.E. ENGINE ROOM	2	14780	37	072	121	270	"	LEAD COVERED & BRAIDED.
BOILER ROOM & ENGINE ROOM	2	10462	7	052	22.8	20	"	"
LIGHTING FORWARD	2	10640	37	083	76.3	340	"	"
B. AFT.	2	19640	37	083	93.4	220	"	"
C. CREW FORWARD	2	01046	7	044	4.0	860	"	LEAD COVERED & TARRED JUTE SERVED.
C. " AFT.	2	02214	7	064	10.75	740	"	"
D. CARGO	2	02214	7	064	23	170	"	LEAD COVERED & BRAIDED.
E. EMERGENCY	2	06000	19	064	53.3	20	"	"
WIRELESS	2	00701	7	036	6.8	260	"	"
SEARCHLIGHT	4	00194	3	029	45	540	"	"
MASTHEAD LIGHT	—	—	—	—	—	—	—	—
SIDE LIGHTS	4	—	—	—	—	160	"	"
COMPASS LIGHTS	6	—	—	—	—	50	"	"
POOP LIGHTS	—	—	—	—	—	—	—	—
G.CARGO LIGHTS	48	00299	3	036	45	590	"	LEAD COV & TARRED JUTE SERVED.
ARC LAMPS	—	—	—	—	—	—	—	—
H.H. HEATERS	2	07572	19	072	25	170	"	LEAD COVERED & BRAIDED.

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.
BALLAST PUMP	—	—	—	—	—	—	—	—
MAIN BILGE LINE PUMPS	—	—	—	—	—	—	—	—
GENERAL SERVICE PUMP	—	—	—	—	—	—	—	—
EMERGENCY BILGE PUMP	1	03360	19	052	56	500	RUBBER	LEAD COVERED & BRAIDED & LEAD COVERED ARM & BRAIDED.
SANITARY PUMP	—	—	—	—	—	—	—	—
CIRC. SEA WATER PUMPS	—	—	—	—	—	—	—	—
CIRC. FRESH WATER PUMPS	—	—	—	—	—	—	—	—
AIR COMPRESSOR	—	—	—	—	—	—	—	—
FRESH WATER PUMP	1	00194	3	029	3	100	"	LEAD COVERED ARM & BRAIDED.
ENGINE TURNING GEAR	—	—	—	—	—	—	—	—
ENGINE REVERSING GEAR	—	—	—	—	—	—	—	—
LUBRICATING OIL PUMPS	1	—	—	—	1.4	150	"	"
OIL FUEL TRANSFER PUMP	—	—	—	—	—	—	—	—
WINDLASS	—	—	—	—	—	—	—	—
WINCHES, FORWARD	—	—	—	—	—	—	—	—
WINCHES, AFT	—	—	—	—	—	—	—	—
STEERING GEAR	—	—	—	—	—	—	—	—
WORKSHOP MOTOR	1	00701	7	036	20	100	"	"
VENTILATING FANS 1/2 H.P.	3	00299	3	036	5	100	"	LEAD COVERED & BRAIDED.
"	5	—	—	—	4	180	"	"
"	2½	4	—	—	10	120	"	"
"	6½	1	01046	7	044	25.6	120	"
FORCED DRAUGHT FANS	2	04650	37	033	205	120	"	"
REFRIG FANS	2	02214	7	064	24.7	500	"	LEAD COVERED & TARRED JUTE SERVED.
"	2	01046	7	044	24.7	100	"	"
LAUNDRY MOTORS	3	02214	7	064	46	800	"	"
GALLEY	7							

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
John Brown & Company, Limited

J.W. Anderson
Clydabank Secretary

Electrical Engineers. Date

COMPASSES.

Distance between electric generators or motors and standard compass **45 FEET FROM WIRELESS MACHINE.**

Distance between electric generators or motors and steering compass **40 "**

The nearest cables to the compasses are as follows :—

A cable carrying **5** Ampères **5** feet from standard compass **8** feet from steering compass.

A cable carrying **•1** Ampères **•1** feet from standard compass **1** 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 **any** course in the case of the standard compass, and **Nil** degrees on **any** course in the case of the steering compass.

John Brown & Company, Limited.

J.W. Anderson
Clydabank Secretary

Builder's Signature. Date

Is this installation a duplicate of a previous case? **No.** If so, state name of vessel **S.S. Obilo**

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.

It is submitted that
THIS BILL IS FOR
Elec. Light

B.P.

19/5/27

*A. 16
16/5/27.*

Total Capacity of Generators **425 Kilowatts**

The amount of Fee ... £ **42. 2. 6.** : { When applied for,
5/5/1927

Travelling Expenses (if any) £ : { When received,
12/5/1927

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

Committee's Minute GLASGOW 17 MAY 1927.

In 924.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Assigned

Elec. Light.

84



© 2020

Lloyd's Register
Foundation