

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

12 SEP 1925

Date of writing Report

19

When handed in at Local Office

10/9/1925

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book.

Newcastle.

Date, First Survey

15 Jan.

Last Survey

27 May 1925.

(Number of Visits 19)

22581 on the

"Humber Arm"

Tons

Gross 5758

Net 3504

Built at

Newcastle

By whom built

Armstrong Whitworth & Co. Ltd

No. 1000

When built

1925

Owners

Newfoundland Export & Shipping Co.

Port belonging to

St John's Newfoundland

Electric Light Installation fitted by

Sidd. by Armstrong Whitworth & Co. Ltd

Contract No. 1000

When fitted 1925

System of Distribution

Double wire

Pressure of supply for Lighting

100

volts, Heating

volts, Power

100

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

On dynamo flat at starboard side of engine room after end

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

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

On dynamo flat 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

and

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

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

Yes

individual fuses to voltmeter, pilot or earth lamp

connections of switches

Yes

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

Double pole switches

fuses fitted to each generator, double pole switches & fuses on each outgoing circuit

Instruments on main switchboard

2

ammeters

1

volts

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

Connected to earth through switches & fuses

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

W 404-0116(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 maximum between bus bars and any point of the installation under maximum load *4.77 volts*
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

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 & armoured clipped to structure with galvanised iron clips, lead covered secured 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 VI *Yes*

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements

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 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 *none fitted*

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 *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

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 *—*

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 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 *—*

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 *—*

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 *—*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *—*

| 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 | 12 | 100 | 120 | 350 | Single cylinder steam engine | | | |
| AUXILIARY | | | | | | | | | |
| EMERGENCY | | | | | | | | | |
| 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. Amperes. | Approximate Length. (Lead and Return.) Feet. | Insulated with | HOW PROTECTED. |
| | | | | No. | Diameter. | | | | |
| | MAIN GENERATORS | 2 | .1168 | ✓ | .064 | 120 | 60 | V.I.R | lead covered & arm'd |
| | AUXILIARY GENERATOR | | | | | | | | |
| | EMERGENCY GENERATOR | | | | | | | | |
| | ROTARY TRANSFORMER | | | | | | | | |
| | AUXILIARY SWITCHBOARDS | | | | | | | | |
| | ENGINE ROOM | 2 | .00701 | ✓ | .036 | 17.1 | 30 | bo | bo |
| | BOILER ROOM | | | | | | | | |
| | Navigation bio box | 2 | .02214 | ✓ | .064 | 13.7 | 450 | bo | bo |
| | Aft Sec Box | 2 | .02214 | ✓ | .064 | 40.6 | 150 | bo | bo |
| | Port bio Box | 2 | .00701 | ✓ | .036 | 11.4 | 90 | bo | bo |
| | Stbd bio Box | 2 | .00299 | ✓ | .036 | 9.6 | 10 | bo | lead covered |
| | Aft dis box | 2 | .02214 | ✓ | .064 | 19.6 | 300 | bo | lead covered & arm'd |
| | Forward sec box | 2 | .06 | ✓ | .064 | 31.5 | 300 | bo | bo |
| | Port bio Box | 2 | .00701 | ✓ | .036 | 16.0 | 90 | bo | lead covered |
| | Stbd bio Box | 2 | .00701 | ✓ | .036 | 20.4 | 10 | bo | bo |
| | Forward bio Box | 2 | .02214 | ✓ | .064 | 15.1 | 390 | bo | lead covered & arm'd |
| | WIRELESS | 2 | .02214 | ✓ | .064 | 25 | 480 | bo | bo |
| | MASTHEAD LIGHT | 2 | .00299 | ✓ | .036 | 1.0 | 270 | bo | bo |
| | SIDE LIGHTS | 2 | .00455 | ✓ | .029 | 1.0 | 520 | bo | bo |
| | COMPASS LIGHTS | 2 | .00194 | ✓ | .029 | 1.0 | 140 | bo | lead covered. |
| | STEERING LIGHTS | 2 | .00455 | ✓ | .029 | 1.0 | 65 | bo | bo |
| | CARGO LIGHTS | 2 | .00299 | ✓ | .036 | 3.6 | 730 | bo | bo |
| | ARC LAMPS | | | | | | | | |
| | HEATERS | | | | | | | | |

| 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 | | | | | | | | |
| | 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 | .00701 | ✓ | .036 | 34 | 70 | V.I.R | lead covered & arm'd |
| | 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 Rules.
The foregoing is a correct description.

S. W. L. A. W. & Co. Ltd.

Electrical Engineers.

Date

6/9/25

COMPASSES.

Distance between electric generators or motors and standard compass

120 feet

Distance between electric generators or motors and steering compass

110 feet

The nearest cables to the compasses are as follows:—

A cable carrying *.5* Ampères *1* feet from standard compass *4* feet from steering compass.

A cable carrying *.5* Ampères *8* feet from standard compass *1* feet from steering compass.

A cable carrying *.5* Ampères *4* feet from standard compass *4* 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.

SIR W. G. ARMSTRONG, WHITWORTH & CO. LTD.

H. G. Williams

Builder's Signature.

Date *9. 9. 25.*

GENERAL MANAGER

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.)

The above installation is in accordance with the Society's Rules. The vessel is eligible in my opinion for notation electric light, wireless

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

W. T. Badger

18/9/25

Total Capacity of Generators *24.* Kilowatts

The amount of Fee ... *£ 19 : 10/-*

When applied for, *5/8/19.25*

Travelling Expenses (if any) £

When received, *25/8/19.25*

W. T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Im. 9. 21. — Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



© 2020

Lloyd's Register Foundation