

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

12 MAY 1926

Received at London Office
NEWCASTLE-ON-TYNE

Date of writing Report

19

When handed in at Local Office

1914) 1026 Port of

No. in Survey held at

hewcastle.

Date, First Survey

12 March

Last Survey

1 April 1926

(Number of Visits.....)

Reg. Book. Supt.

37994 on the

Arthur. W. Sewall

Tons

Gross 6030

Net 3628

Built at hewcastle.

By whom built

Armstrong Whitworth & Co.

Card No. 1012

When built 1926

No. and dis

Owners J. A. Christensen

Port belonging to

Oslo

Electric Light Installation fitted by

Armstrong Whitworth & Co. Ltd.

Contract No. 1012

When fitted 1926.

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

alternating current system, state frequency of periods per second

As 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

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 and clearly marked

Yes

, are they so spaced or shielded that they cannot be accidentally earthed,

short circuited

Yes

Are the lubricating arrangements of the generators as per Rule

Yes

Position of Generators

on dynamo flat at after end of engine room

the ventilation in way of the generators satisfactory

Yes

, are they clear of all inflammable material

Yes

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

their axis of rotation fore and aft

Yes

Nothing, 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 at after end of engine room

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

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

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

—

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

are 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

Yes

, individual fuses to voltmeter, pilot or earth lamp

Yes

, connections of switches

Yes

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

switches & fuses on each generator & on each outgoing circuit

Instruments on main switchboard

2

ammeters

2

volts

synchronising device for paralleling purposes.

With Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

Earth leakage

detector

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

Yes

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

Yes

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W1115-0069

Lloyd's Register
Foundation

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 *2.96 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 cables secured with 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

Joints in Cables, state if any, and how made, insulated, and protected *home 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 *home 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

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 gastight pendants*

in gastight piping

where are the controlling switches situated *in pantry on bridge deck*

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 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 *Yes*

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	8.03	110	73	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 GENERATOR	2	.06	✓	19	.064	73	80	V.I.R. Lead covered
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.00455	✓	7	.029	13.9	32	50 Lead covered + arm'd
	BOILER ROOM								
	Navigation	2	.02214	✓	7	.064	4.5	560	50 50
	Midship's S. Box	2	.0396	✓	19	.052	22.4	510	50 50
	Instruments	2	.00701	✓	7	.036	3.9	90	50 50
	Midship acc'n	2	.00701	✓	7	.036	15.8	16	50 Lead covered
	Pump room	2	.00455	✓	7	.029	2.7	14	50 50
	Aft acc'n S. Box	2	.02214	✓	7	.064	30.9	120	50 Lead covered + arm'd
	Aft acc'n S. Box	2	.00455	✓	7	.029	16.6	16	50 Lead covered
	Aft acc'n Port 50	2	.00455	✓	7	.029	14.1	100	50 50
	WIRELESS	2	.02214	✓	7	.064	25	560	50 Lead covered + arm'd
	MASTHEAD LIGHTS	2	.00299	✓	3	.036	.9	206	50 50
	SIDE LIGHTS	2	.00194	✓	3	.029	.9	130	50 50
	COMPASS LIGHTS	2	.00194	✓	3	.029	.5	40	50 Lead covered
	STERN LIGHT	2	.00299	✓	3	.036	.9	550	50 Lead covered + arm'd
	CARGO LIGHTS	2	.00299	✓	3	.036	3.2	320	50 50
	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	.002214	✓	7	.064	30	34	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.

Sir W. G. Armstrong Whitworth & Co. Ltd. Electrical Engineers.
JW.

Date 28/4/26.

COMPASSES.

Distance between electric generators or motors and standard compass

200 feet

Distance between electric generators or motors and steering compass

198 feet

The nearest cables to the compasses are as follows:—

A cable carrying .5 Ampères on the ~~8~~ standard compass 8 feet from steering compass.

A cable carrying .5 Ampères 8 feet from standard compass on the ~~8~~ steering compass.

A cable carrying 4.5 Ampères 8 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. 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 degrees on 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.

J. G. Williams

Builder's Signature.

Date 28-4-1926.

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 elec light, wireless.

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

Total Capacity of Generators 16. Kilowatts

The amount of Fee ... £ 15 : 10 :
Travelling Expenses (if any) £ : :
When applied for, 10 MAY 1926
When received, 17 MAY 1926

W. T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

21 MAY 1926

Assigned

Elec Light



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