

Rpt. 13.

No. 76168

## REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

MON. 20 NOV. 1922

Date of writing Report 8/11/1922 When handed in at Local Office 17/11/1922 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle

Date, First Survey 9/10/22 Last Survey 26/10/1922

Reg. Book. Supp.

80739 on the San Rosendo

(Number of Visits.....)

Tons { Gross 7000  
Net

Built at Newcastle

By whom built Armstrong Whitworth &amp; Co. Ltd. Yard No. 989 When built 1922

Owners Eagle Oil Transport Co. Ltd.

Port belonging to London

Electric Light Installation fitted by Armstrong Whitworth &amp; Co. Ltd. Contract No. 989 When fitted 1922

## 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 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, or short circuited yes ✓

Position of Generators on platform at after end of engine room yes ✓, Are the lubricating arrangements of the generators as per Rule yes ✓

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 platform at after end of engine room, sub switchboard

midships on bridge deck ✓ 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 yes ✓, connections of switches yes ✓

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

switches &amp; fuses on each generator &amp; outgoing circuit ✓

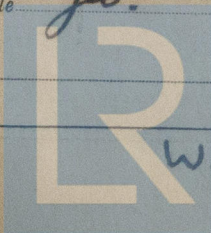
Instruments on main switchboard 2 ✓ ammeters 2 ✓ voltmeters — synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system earth lamps with

switches ✓

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  
W546-01221/3



Insulation of Cables, state type of cables, single or twin *single* are the cables insulated and protected as per Tables III or *III* of the Rules *yes*

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *3 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 varnished cable clipped to beams etc with galvanised iron clips, lead covered cable clipped up with brass clips, special twin clipped to under side of gangway*

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 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

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 *special gastight*

*"Hough" fittings* in gastight piping, how are the cables led

where are the controlling switches situated *at the distribution box in bridge space port*

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 *yes*

if not of this type, state distance of the combustible material horizontally or vertically above the motors

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			Revs. per Min.	DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.
		Kilowatts.	Volts.	Ampères.			Fuel Used.
MAIN	2	12	100	120	320	Two double acting open type single cylinders steam engines	
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. 2m. 7m.	2	.1168	37	.064	120	40ft. 60ft.	V.I.R.	Lead covered varnished.
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS	12	.0024	61	.08	98.6	320	V.I.R.	Lead covered varnished tapes
	ENGINE ROOM <i>dis. box</i>	2	.01462	7	.082	8.6	20	"	armoured & braided (Special twin)
	BOILER ROOM " " "	2	.00455	7	.029	3.4	180	"	Lead covered varnished
	<i>Section box for above</i>	2	.01462	7	.052	12.0	20	"	"
	<i>Section box engine gto</i>	2	.0396	19	.052	30.8	130	"	"
	<i>dis. box " " Port</i>	2	.02214	7	.064	15.6	110	"	Lead covered
	" " " " <i>SH</i>	2	.01462	7	.052	15.2	10	"	"
	<i>dis. box navigation</i>	2	.02214	7	.064	11.6	60	"	"
	<i>Section box officers gto</i>	2	.07592	19	.072	60.8	30	"	"
	<i>dis. box off gto <i>SH</i></i>	2	.01462	7	.052	14.8	10	"	"
	" " " " <i>Port</i>	2	.01462	7	.052	16.0	55	"	"
	" " <i>Stateroom</i>	2	.01462	7	.052	12.6	60	"	"
	<i>2 dis. boxes engine gto</i>	2	.07592	19	.072	17.4	360	"	L.C.A. special twin
	WIRELESS	2	.02214	7	.064	25	110	V.I.R.	L.C.A.
	SEARCHLIGHT <i>Yone</i>	3	.00299	3	.036	1.12	300	"	Taped armoured & braided
	MASTHEAD LIGHT <i>Sham</i>	3	.00299	3	.036	1.12	300	"	"
	SIDE LIGHTS	2	.00194	3	.029	1.12	100	"	Lead covered varnished
	COMPASS LIGHTS	2	.00194	3	.029	6	180	"	Lead covered & armoured
	OTHER LIGHTS	2	.00194	3	.029	1.12	185	"	"
	CARGO LIGHTS	2	.00194	3	.029	3.6	130	"	"
	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	7	.036	10	150	V.I.R.	Lead covered term?
	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.

W. G. Armstrong Whitworth & Co. Electrical Engineers.

Date 10/11/22

#### COMPASSES.

Distance between electric generators or motors and standard compass 215 feet, nearest motor 25 feet, aft compass 45 feet, nearest motor 45 feet.

Distance between electric generators or motors and steering compass 218 feet, nearest motor 20 feet.

The nearest cables to the compasses are as follows:—

A cable carrying .6 Amperes 1 feet from standard compass 4 feet from steering compass.

A cable carrying .6 Amperes 4 feet from standard compass 1 feet from steering compass.

A cable carrying .8 Amperes 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.

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 5.21 degrees on course in the case of the standard

compass, and 5.11 degrees on course in the case of the steering compass.

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

H. G. Williams

Builder's Signature.

Date Nov 11/22

Is this installation a duplicate of a previous case Yes

If so, state name of vessel

"San Roberto"

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

W. T. Badger  
22/11/22

Total Capacity of Generators 24 Kilowatts

The amount of Fee ... £ 19 : 10 : 00

When applied for,

17/11/22

Travelling Expenses (if any) £

When received,

See debit book.

Committee's Minute TUE 28 NOV. 1922

Assigned

Im. 22.—Transfer.  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



© 2020

Lloyd's Register  
Foundation