

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 19 When handed in at Local Office 24/3/10 24 Port of NEWCASTLE-ON-TYNE Received at London Office 14 APR 1924

No. in Survey held at Newcastle Date, First Survey 25 Jan 1924 Last Survey 14 March 1924
Reg. Book. (Number of Visits 10)

32412 on the San Salvador Tons { Gross 5650

Built at Newcastle By whom built Armstrong Whitworth & Co. Ltd. Yard No. 992 When built 1923

Owners Eagle Oil Transport Co. Ltd. Port belonging to

Electric Light Installation fitted by Armstrong Whitworth & Co. Ltd. Contract No. 992 When fitted 1924

System of Distribution Double wire system of distribution

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 Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators Platform at after end of 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 — 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

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

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, 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 switch

fuses on dynamo main + on each outgoing circuit

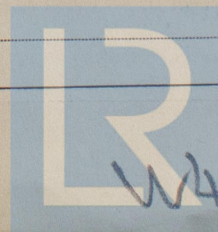
Instruments on main switchboard 2 ammeters 2 voltmeters — synchronising device for paralleling purposes.

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

connected to earth through fuses + 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



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W41-0226(12)
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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 *3.7*

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 cable clipped to beams etc with galvanised iron clips. Lead covered cables clipped up brass clips. Special twin cable fitted in hangers to underside of gangway.*
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 *yes*, are their connections made as per Rule *yes*

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 *yes*

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 gaslight "Kough" fittings*, how are the cables led *in gas tight piping*

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

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

Arc Lamps, other than searchlight lamps, No. of *1*, are their live parts insulated from the frame or case *yes*, are their fittings as per Rule *yes*

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 *1 ft* and *1 ft*

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				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	320	Bomb acting open type				
AUXILIARY ...						Single cylinders				
EMERGENCY ...						Steam 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.	
				No.	Diameter.					
	MAIN GENERATOR...	2	.1168	37	.064	120	40460	V.I.R.	Lead cov + arm	
	AUXILIARY GENERATOR									
	EMERGENCY GENERATOR									
	ROTARY TRANSFORMER...									
	AUXILIARY SWITCHBOARDS...	2	.3824	37	.103	92.2	1408	"	"	Special twin.
	ENGINE ROOM	2	.01462	7	.052	8.8	1.0	"	Lead cov + arm	
	BOILER ROOM	2	.01046	7	.044	3.2	180	"	"	
	Section box for above	2	.01462	7	.052	12.0	20	"	"	
	Bo Eng gfo	2	.0396	19	.052	31.0	14.0	"	"	
	Bo Room " Eng gfo	2	.02214	7	.064	15.6	10	"	Lead covered	
	" " " Stl	2	.02214	7	.064	15.4	80	"	Lead cov + arm	
	Section for office gfo	2	.07592	19	.072	54.4	10	"	Lead covered	
	Bo box for " Stl	2	.02214	7	.064	19.6	60	"	"	
	" " " " Stl	2	.02214	7	.064	17.0	10	"	"	
	hangation	2	.02214	7	.064	11.6	130	"	"	
	Bo box for pump room	2	.01046	7	.044	1.2	80	"	Lead cov + arm	
	Bo box Eng gfo	2	.07592	19	.072	17.8	15	"	Lead cov	
	" " " " Stl	2	.07592	19	.072	17.8	360	"	Lead cov + arm (Special twin)	
	" " " " Stl	2	.01462	7	.052	10.2	10	"	Lead cov + arm	
	WIRELESS	2	.02214	7	.064	28.0	70	"	Lead cov	
	SEARCHLIGHT	2	.00299	3	.036	1.12	280	"	Lead cov + arm (Special twin)	
	MASTHEAD LIGHT... MAIN	2	.00299	3	.036	1.12	250	"	"	
	SIDE LIGHTS	2	.00194	3	.029	1.12	80	"	Lead covered	
	COMPASS LIGHTS	2	.00194	3	.029	.28	150	"	Lead cov + head cov + arm	
	Star LIGHTS	2	.00194	3	.029	1.12	170	"	Lead cov + arm	
	CARGO LIGHTS	2	.00455	7	.029	3.6	128	"	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. Ampères.	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	.01046	7	.044	10	120	V.I.R.	Lead cov + arm	
	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.

Date *24. 3. 24.*

COMPASSES.

Distance between electric generators or motors and standard compass *215 feet*

Distance between electric generators or motors and steering compass *212 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 *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 *24. 3. 24.*

GENERAL MANAGER,

Is this installation a duplicate of a previous case *Yes* If so, state name of vessel *S.S. "San Quirino"*

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
4/4/24.

Total Capacity of Generators *24* Kilowatts

The amount of Fee ... £ *19 : 10/-* When applied for, *19* APR 1924

Travelling Expenses (if any) £ : : When received, *See other book.*

W. T. Badger
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE. 8 APR. 1924*

Assigned

Im 322.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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