

Rpt. 13.

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

10 NOV 1926

Date of writing Report

19

When handed in at Local Office

17/11

19 26 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at Sunderland.Date, First Survey 4 Aug.Last Survey 27 Oct. 19 26

Reg. Book.

(Number of Visits.....)

on the M. V. SilverbeechTons { Gross 5311Net 3096Built at SunderlandBy whom built Si. J. Haring. Smold. Yard No. 695When built 1926Owners Silver Line LtdPort belonging to LondonElectric Light Installation fitted by Sunderland Forge & Eng. Co. Ltd. Contract No. 695 When fitted 1926

System of Distribution

Double wire distribution box

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 rating

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, clearly marked, and furnished with sockets

Yes

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

Yes

Are the lubricating arrangements of the generators as per Rule

Yes

Position of Generators

Engine Room Port & Starboard sides

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

about 6 in.

and

Yes

are the generators protected from mechanical injury and damage from water, steam or oil

Yes

are their axes 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

Engine Room Port side.

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, non-ignitable 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 insulated from the slab with mica or micaite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework

Yes

and is the frame effectively earthed

Yes

Are the fittings as per Rule regarding:— 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

D.P. Load & Reverse Current.

Circuit Breakers & Triple pole switches for Generators

D.P. Load Circuit Breakers for Steering Gear & EmergencyDynamo, D.P. Switches & Fuses for feeder circuits.Instruments on main switchboard 5 + 1 Aux. ammeters. 3 + 1 Aux. voltmeters.

synchronising device for paralleling purposes.

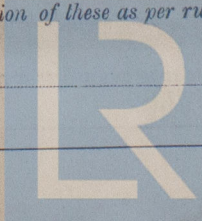
Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

Earth Lamps.

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

Yes

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

Yes

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Lloyd's Register

W11 07H 028

Cables: *Single, twin, concentric, or multiconductor* Single & Twin are the cables insulated and protected as per Tables IV or V of the Rules. Yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load Lighting 4 Volts Power 6 1/2 Volts

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets

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.

Support and Protection of Cables, state how the cables are supported and protected *secured to Iron plate with Galv. Iron clips in Cargo Holds & Engln, Lead covered & Braided Cable in Brass Clips in Accommodation.*

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 N/A

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

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed 4p state the material of which the bushes are made Lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas All cables bonded on
Lighting & Power Circuits.

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. *Oil Engine on Engine Room Platform, Ford End.*

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

Secondary Batteries, are they constructed and fitted as per Rule _____

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and where'er 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 fillings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected.

where are the controlling switches situated.

Searchlight Lamps, No. of ^{Connection &} *Bustans only*, whether fired 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 _____, are the motors placed in well-ventilated compartments in which in flammable gases cannot accumulate and clear of all inflammable material _____.

are they protected from mechanical injury and damage from water, steam or oil yes are their axes of rotation fore and aft Yes except steering
if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draft, in 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 and fitted as per Rule.....

Lightning Conductors, where lig'ning 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	3	100	220	145	100	Diesel Engine		
AUXILIARY	1	6	220	27.3	1000	oil Engine		
EMERGENCY								
ROTARY TRANSFORMER								

[illegible]

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. "m. amp."	Approximate Length. (Lead and Return.) Feet.	Insulated with	HO-V PROTECTED.
				No.	Diameter.				
	BALLAST PUMP	1	0.1500	37	.072	✓ 140	252	Y I R	L 64B
	MAIN BILGE LINE PUMPS ...	1	.0145	7	.052	✓ 20	172	"	"
	GENERAL SERVICE PUMP ...	1	.0145	7	.052	✓ 24	172	"	"
	EMERGENCY BILGE PUMP ...								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS ...	1	.1500	37	.072	✓ 118	65	"	"
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR. ^{Nº1} _{Nº2} ...	1	.75.	31	.103	✓ 360.	110	Y.C	L C 24B
	FRESH WATER PUMP ...	1	.1500	37	.072	✓ 134	98		
	ENGINE TURNING GEAR ...	1	.1000	13	.083	✓ 118	180	Y. I. R	L 5 B
	ENGINE REVERSING GEAR ...								
	LUBRICATING OIL PUMPS ...	2	.0145	7	.052	✓ 24 EACH.	60		"
	OIL FUEL TRANSFER PUMP	1	.0145	7	.052	✓ 34	240		
	WINDLASS	1	.1500	37	.072	✓ 255	8	Y. Cambric	L 64+B
	WINCHES, FORWARD ...	4	.1500	37	.072	✓ 116 EACH	48	"	"
	WINCHES, AFT	5	.1500	37	.072	✓ 116 EACH	48	"	"
	" MIDSHIP	3	.1500	37	.072	✓ 116 EACH	48	"	"
	STEERING GEAR—							W. T. Badger	
	(a) MOTOR GENERATOR...								
	(b) MAIN MOTOR	2	.0600	13	.064	✓ 80 EACH	600	Y I R	L 64+B
	WORKSHOP MOTOR ...	1	.0045	7	.023	✓ 8	300	"	L 6+B
	VENTILATING FANS								
	AUX. FUEL PUMP.	1	.1000	13	.083	✓ 118	25	"	"
	JACKET WATER PUMPS	2	.1500	37	.072	✓ 140	60+100	"	"
	SHARPLES M/C	3	.0045	7	.023	✓ 10 EACH	100	"	"
	CLEAN OIL PUMP	1	.0045	7	.023	✓ 8	100	"	"
	AUX JACKET WATER PUMP	2	.0045	7	.023	✓ 12 EACH	80	"	"
	CRANE MOTOR	1	.0045	7	.023	✓ 16	100	"	"
	REFRIG. MOTOR	1	.0100	7	.044	✓ 17.	300	"	"

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.

The Sunderland Forge & Engineering Co., Ltd. Electrical Engineers. Date 5th Nov. 1926.

COMPASSES.

Distance between electric generators or motors and standard compass 112 feet
Distance between electric generators or motors and steering compass 112 feet
The nearest cables to the compasses are as follows:—
A cable carrying 3.25 Amperes 15 feet from standard compass 15 feet from steering compass. ✓
A cable carrying .1 Amperes 10 feet from standard compass Led into feet from steering compass. ✓
A cable carrying .1 Amperes Led into feet from standard compass 10 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.

MIR JAMES LAING & SONS, LIMITED.

James Laing
Director

Builder's Signature. Date 9-11-26

Is this installation a duplicate of a previous case. Yes If so, state name of vessel Silverash

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.H. 25/11/26

Signature of Surveyors

Total Capacity of Generators 306 Kilowatts.

The amount of Fee ... £ 39 : —
Newcastle %.
Travelling Expenses (if any) £ : :
When applied for, 26 Oct 9. 26
When received, 30 Oct 9. 26 P.M.

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

Committee's Minute

Assigned



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Foundation