

Rpt. 13.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

No. 59120

DEC 8 1937

Date of writing Report 29-11-1937 When handed in at Local Office 4-12-37 Port of Glasgow
No. in Survey held at Yoon Reg. Book. 40097 on the M.V. "SAINT EUNAN"
Date, First Survey 28-10-37 Last Survey 29-11-1937
(Number of Visits 4)
Built at Yoon By whom built Alma. S.B. Co Ltd. Yard No. 427 When built 1937
Owners R. Harper & Son Port belonging to Yoon
Electric Light Installation fitted by Selford Gries Mackay & Co Ltd
Is the Vessel fitted for carrying Petroleum in bulk ho. Contract No. 427 When fitted 1937

Tons { Gross 436
Net 190

System of Distribution Two wires
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 temperature rise 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 ho., is an adjustable regulating resistance fitted in series with each shunt field Yes
approved Yes Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing 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 In Engine Room
in way of the generators satisfactory Yes, are they clear of all inflammable material Yes, is the ventilation
woodwork or other combustible material, state distance of same horizontally from or vertically above the generators — if situated near unprotected
are the generators protected from mechanical injury and damage from water, steam or oil Yes and —
Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes, are their axes of rotation fore and aft Yes
in metallic contact Yes are the prime movers and their respective generators
Main Switch Boards, where placed In 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, non-ignitable non-absorbent
materials Yes, is all insulation of high dielectric strength and of permanently high insulation resistance Yes
is it of an approved type Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other
non-hygroscopic insulating material, and the slab similarly insulated from its framework Indanypa, is the non-hygroscopic insulating material of an approved
type Yes, and is the frame effectively earthed Yes
Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, temperature rise of
omnibus bars Yes, individual fuses to voltmeter, pilot or earth lamp Yes, are moving parts of switches alive in the
"off" position ho., are all screws and nuts securing connections effectively locked Yes, are any fuses fitted on the live side of
switches ho.
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches
Double pole switch for each generator & each outgoing circuit.
Are turbine driven generators fitted with emergency trip switch as per rule —
Are cupboards or compartments containing switchboards composed of
fire-resisting material or lined with approved material —
Instruments on main switchboard 2 ammeters 2
voltmeters — synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection
Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system
Earth Lamp
do these comply with the requirements of the Rules Yes are the fusible cutouts of an approved type Yes have the reversed

current protection devices been tested under working conditions

construction, protection, insulation, material, and position of these as per Rule

Cables: Single, twin, concentric, or multicore *Single & Twin* are the cables insulated and protected as per Tables IV, V, X or XI of the Rules

If the cables are insulated otherwise than as per Rule, are they of an approved type

any point of the installation under maximum load

area of 0.04 square inch and above provided with soldering sockets

If conductors are ~~paper~~ varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound

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 *Main through hold L.C.A. clips to stowage. Also question answered, Accommodation L.C. Machinery space L.C.A.*

If cables are run in wood casings, are the casings and caps secured by screws

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

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

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

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *Lead covering a running of cables bonded & earthed.*

are their connections made as per Rule

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule

Navigation Lamps, are these separately wired

has each navigation lamp an automatic indicator as per Rule

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight

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

where are the controlling switches situated

are all fittings suitably ventilated

Heating and Cooking Appliances, are they constructed and fitted as per Rule

Searchlight Lamps, No. of

Are Lamps, other than searchlight lamps, No. of

Motors, are their working parts readily accessible

are the brushes, brush holders, terminals and lubricating arrangements as per Rule

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

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing

are required, are these fitted as per Rule

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 self-contained, battery-fed type approved by the Home Office

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule

Joint Boxes, Section and Distribution Boards, is the

Fall of Pressure, state maximum between bus bars and

Cable Sockets, are the ends of all cables having a sectional

Paper Insulated and Varnished Cambric Insulated Cables,

Cable Runs, are the cables fixed as far as possible in accessible positions

Are cables in machinery spaces, galleys, lavatories, bathrooms and lavatories lead covered or run in conduit

are the cap screws of brass

are the cables run in

If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII

are the cables run in

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PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	40	220	182	750	Oil Engine (see London Regt. 104623)	Heavy Oil	Above 150° F.
AUXILIARY	1	10	220	45.5	1000	" (see Manchester Regt. 7027)	"	"
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.			COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.	Rule.			
MAIN GENERATOR	2	.12	19	.064	182	244	✓	76	Varn. Cambric	L.C.A.
EQUALISER CONNECTIONS										
AUXILIARY GENERATOR	1	.0225	7	.064	45.5	46	✓	30	Rubber	L.C.A.
EMERGENCY GENERATOR										
ROTARY TRANSFORMER										
ENGINE ROOM	1	.003	3	.036	2	12	✓	12	"	"
BOILER ROOM										
AUXILIARY SWITCHBOARDS										
ACCOMMODATION										
MIDSHIP AND FORWARD	1	.003	3	.036	7	12	✓	170	"	"
AFT	1	.003	3	.036	3	12	✓	40	"	"
NAVIGATION	1	.003	3	.036	2	12	✓	190	"	"
WIRELESS										
SEARCHLIGHT	1	.002	3	.029	.18	7.8	✓	180	"	Armoured L.C.B.
MASTHEAD LIGHT	1	.002	3	.029	.18	7.8	✓	40	"	L.C.B.
SIDE LIGHTS	1	.002	3	.029	.10	7.8	✓	20	"	L.C.B.
COMPASS, LIGHTS										
POOP LIGHTS										
CARGO LIGHTS										
ARC LAMPS										
HEATERS	2.6	.01	7	.044	15	31	✓	170	"	L.C.A.

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP	1	1	.01	7	.044	19/31	31	90	Rubber	L.C.A.
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	1	1	.003	3	.036	4.8	12	140	"	"
WINDLASS	1	1	.06	19	.064	40.5	122	80	V. Cambric	L.C.A.B.
WINCHES, FORWARD	1	1	.06	19	.064	70.7	122	95	"	"
WINCHES, AFT	1	1	.06	19	.064	70.7	122	140	"	"
CAPSTAN	1	1	.0225	7	.064	40.5	46	95	Rubber	L.C.A.
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR	1	1	.007	7	.036	17.8	24	100	"	"
WORKSHOP MOTOR										
VENTILATING FANS										
OIL FUEL HEATER		1	.01	7	.044	27	31	96	"	"
LUB. OIL HEATER		1	.01	7	.044	27	31	96	"	"
OIL PURIFIERS	2	1	.003	3	.036	2.6	12	100	"	"

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All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

Telford, Gifford, Mackay & Co. Ltd.

Thomas Ferguson.

DIRECTOR.

Electrical Engineers.

Date 1-12-37

COMPASSES.

Distance between electric generators or motors and standard compass

Distance between electric generators or motors and steering compass

80 feet.

The nearest cables to the compasses are as follows:—

A cable carrying .14 Amperes — feet from standard compass led into feet from steering compass.

A cable carrying 2 Amperes — feet from standard compass 6 feet from steering compass.

A cable carrying Amperes — feet from standard compass 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 — degrees on — course in the case of the standard

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

FOR ALCOA SHIPBUILDING CO., Ltd.

Robt. Allan

Builder's Signature.

Date 2.12.37

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, etc.)

The electrical equipment of this vessel has been fitted on board under special survey, tested under full working conditions and found satisfactory. The materials and workmanship are good.

4/12/37

Noted
L.Y.
10/12/37

Total Capacity of Generators 50 Kilowatts.

The amount of Fee ... £ 27 : 10 :

When applied for,

8-DEC-1937

Travelling Expenses (if any) £

19/3.

When received.

5/11 1938 gml 10/1

L. Haffner

Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 7-DEC-1937

Assigned

SEE ACCOMPANYING MACHINERY REPORT.



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