

Rpt. 13.

No. 14244

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

21 OCT 1930

Date of writing Report 16. 10. 1930. When handed in at Local Office 16. 10. 1930 Port of MIDDLESBROUGH.

No. in Survey held at Haverton Hall on Tues Date, First Survey 27 May Last Survey 3 August 1930

Reg. Book.

84543 on the

Sir James Clark Ross

(Number of Visits 21)

Tons { Gross 14362.
Net 8127.

Built at Haverton Hall on Tues By whom built Furness Shipbuilding Co Ltd Yard No. 158 When built 1920-8.

Owners Hvalfangeraktieselskapet Rossvik Port belonging to Sandefjord Norway

Electric Light Installation fitted by Furness Shipbuilding Co Ltd Contract No. 158 When fitted 1930

Is the Vessel fitted for carrying Petroleum in bulk

Yes.

System of Distribution

Double wire

Pressure of supply for Lighting 110 volts, Heating 110 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

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

Position of Generators

Engine Room bottom flat forward

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 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

Near Generators 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

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

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

Triple pole circuit

Breaker for each Generator, double pole switch + fuses for each outgoing circuit

Instruments on main switchboard 8 ammeters 4 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

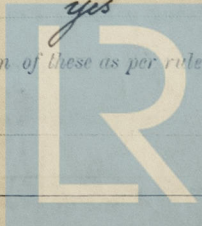
2-10 watt lamps in series + middle point earthed

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



© 2020

Lloyd's Register Foundation

604486-604488-0182 1/3

Continuation of Report No. 14244 dated 16. 10. 30 on the

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office.....

© 2020
Lloyd's Register
Foundation

According to Hamburg Report 21313 dated 10 34 there are 5000 h.p. driven dynamos on board 2 of which (38 Kw each) driven by Malmberg engines were fitted in 10 34
1 3 cyl. Allen added 9.46

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	100	220	455	400	Diesel Engine	Diesel Oil	above 150° F.
AUXILIARY ...	One (Centre)	250	220	44	500	Steam Engine		
EMERGENCY ...	1	32	220	44	500	Steam Engine		
Motor Generators	2	25	110/220	227	1000			
ROTARY TRANSFORMER	2							

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR ...	1	5000	61	.103	Total 426		60	V.C.	L.C.A.B.
EQUALISER CONNECTIONS	-	2000	37	.083	Load 266		60	"	"
MAIN GENERATOR ...	1	5000	61	.103	531.0	186	60	"	"
EMERGENCY GENERATOR	1	1000	19	.083	172		50	"	"
EQUALISER CONNECTION	-	1000	19	.083	190	172	60	"	"
ROTARY TRANSFORMER	1	1000	19	.083	350	266	70	"	"
ENGINE ROOM...									
BOILER ROOM...									
AUXILIARY SWITCHBOARDS									
Sherry Gyro.	1	0.00	7	.044	20.0	31.5	100	V.C.	L.C.A.B.
ACCOMMODATION									
WINCHES									
SEARCHLIGHT									
MASTHEAD LIGHT									
SIDE LIGHTS									
COMPASS LIGHTS									
POOP LIGHTS									
CARGO LIGHTS									
ARC LAMPS									
HEATERS									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP ...	1	1	.0225	7	.064	30.0	68.0	140	V.C.	L.C.A.B.
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP v. Bilge	1	1	.0225	7	.064	25.0	68.0	120	V.C.	L.C.A.B.
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR...	2	1	.0100	7	.044	15.0	31.5	400	V.C.	L.C.A.B.
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS	2	1	.1500	37	.072	120.0	222	300	V.C.	L.C.A.B.
COOLING WATER	1	1	.0100	7	.044	12.0	31.5	100	V.C.	L.C.A.B.
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
HOT WATER PUMPS	2	1	.0040	7	.029	12.0	17.5	60	V.I.R.	L.C.A.B.
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR...										
(b) MAIN MOTOR ...	1	1	.0600	19	.064	120.0	122	500	V.C.	L.C.A.B.
WORKSHOP MOTOR	1	1	.0100	7	.044	15.0	31.5	220	V.C.	L.C.A.B.
VENTILATING FANS										
Cold Water Pumps	2	1	.0040	7	.029	12.0	17.5	80	V.I.R.	L.C.A.B.
Distillers	2	1	.0040	7	.029	12.0	17.5	80	V.I.R.	L.C.A.B.
Centrifuges	3	1	.0040	7	.029	12.0	17.5	80	V.I.R.	L.C.A.B.
Refrig. Compressor	1	1	.0400	19	.052	40.0	84.0	60	V.C.	L.C.A.B.
Refrig. Water pumps	2	1	.0030	3	.036	5.0	12.0	60	V.I.R.	L.C.A.B.
Factory Separators	7	1	.0040	7	.029	10.0	17.5	40	V.I.R.	L.C.A.B.

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.

P. J. Power

Electrical Engineer. Date 4th Oct 1930

FURNESS SHIPBUILDING Co. LIMITED

COMPASSES.

Distance between electric generators or motors and standard compass 610'

Distance between electric generators or motors and steering compass 600'

The nearest cables to the compasses are as follows:—

A cable carrying 1 Ampères 4 feet from standard compass 4 feet from steering compass.

A cable carrying - Ampères - feet from standard compass - feet from steering compass.

A cable carrying - Ampères - feet from standard compass - 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 courses in the case of the standard

compass, and nil degrees on all courses in the case of the steering compass.

FURNESS SHIPBUILDING Co. LTD

J. M. Lovering

Builder's Signature. Date 4th Oct 1930

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 materials and workmanship are good.
This electric installation has been fitted in accordance with the Rules and approved Plan under special survey and has been tested under working conditions with satisfactory results. In our opinion it is suitable for a vessel classed with this Society.

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

14/11/30

Total Capacity of Generators 132 Kilowatts.

The amount of Fee ... £ 37-6-0

Travelling Expenses (if any) £

When applied for, 5-8-1930
When received, 3-9-1930

P. J. Mac G
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Elec Lt

