

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

No. 25636

Date of writing Report

19

When handed in at Local Office

19

Port of

Received at London Office

No. in Survey held at

London

Date, First Survey

Last Survey 1st October 1930

Reg. Book.

82290 on the Steel Twin Sc. RAZMAK

(Number of Visits.....)

Built at

Greenock

By whom built

Harland & Wolff Ltd

Yard No.

Tons

Gross 10854

Net 5183

Owners

P. & O. Steam Navigation Co.

Port belonging to

Greenock

When built

1925-26

Electric Light Installation fitted by

Contract No.

When fitted

Is the Vessel fitted for carrying Petroleum in bulk

System of Distribution

Double Wire, Distribution and Sub-distribution

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

Position of Generators

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

Are the generators 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

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 Dynamo Platform, above Thrust Recess; Emergency Board in

Emergency Dynamo Room

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

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

yes

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

yes

, individual fuses to voltmeter, pilot or earth lamp

yes

, connections of switches

yes

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

The switch gear of the 300 Kw generator consists of 2 Pole Switch, 1500 Amp Double pole circuit breaker, with time lag.

Kw generator as originally fitted. The switch gear of each 300 Kw generator consists of 2 Pole Switch, 1500 Amp Double pole circuit breaker, with time lag.

Ammeters on main switchboard

8

ammeters

2

volts

arranged

for paralleling purposes.

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

Earth Lamps

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

yes

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

yes

© 2021

Lloyd's Register Foundation

003971-003979-0162 2

Cables: Single, twin, concentric, or multicore Single are the cables insulated and protected as per Tables IV or V of the Rules yes
10 volts

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 10 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 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 yes

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 clipped to perforated steel plating
protected by lead covering or lead covering, served, steel armoured & braided over all.
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 VIII yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements yes

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

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 Partitions, 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 all electric light fittings & sockets etc fitted other than to steel work of the ship are provided with earthing connections equivalent to the working conductor.
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 See Belfast Rpt No 9309

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 None

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight W. J. on Deck & rip proof in Eng & Boiler rooms.
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 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 yes, how are the cables led yes

where are the controlling switches situated yes

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

Are Lamps, other than searchlight lamps, No. of yes, 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 axes 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 yes

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted 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	3 1/2	150 300	220	650	400 2400-3000	225 BHP Comp. V. Shin Eng. 1st Reduction Pinion Base & Block Turbine and Direct-Run driven Turbine		
EMERGENCY	1	25	220	114	400	Petrol-Paraffin Engine	Petrol & Paraffin	Installation on boat deck & well ventilated
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 Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	3	7435	91	.103	1345	1383	25 ft 25 ft	V. J. R. V. J. R.	
EQUALISER CONNECTIONS	2	5	61	.103					
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER	✓	✓	✓	✓	✓	✓	✓	✓	✓
ENGINE ROOM									
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION									
WIRELESS									
SEARCHLIGHT									
MASTHEAD LIGHT									
SIDE LIGHTS									
COMPASS LIGHTS									
POOP LIGHTS									
CARGO LIGHTS									
ARC LAMPS									
HEATERS									

See Belfast Report No 9309

See Belfast Report No 9309

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 Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
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—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										

See Belfast Report No 9309

003971-003979-0162 2/2

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.

R. & H. Green and Silley Weir Ltd.

R. & H. Green and Silley Weir Ltd.

Electrical Engineers.

Date *Sept 3/1930*

COMPASSES.

Distance between electric generators or motors and standard compass

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying Amperes feet from standard compass feet from steering compass.

A cable carrying Amperes feet from standard compass 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.

Builder's Signature.

Date

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.)

workmanship good.

These generators were not surveyed by this Society during construction. They have been fitted on board under the Society's survey, tested under full load working conditions and found satisfactory, and in accordance with the Society's rules.

It is submitted that
this vessel is eligible for
THE RECORD.

Blue Light

R. R.

14/10/30

Im. 11.29.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Total Capacity of Generators

Kilowatts.

The amount of Fee £ : :

When applied for,

19

Travelling Expenses (if any) £ : :

When received,

19

Committee's Minute

TUE. 28 OCT 1930

Assigned

*See Minute on London
Report No 95636*

A. R. Riddell

Surveyor to Lloyd's Register of Shipping.



© 2021

Lloyd's Register
Foundation