

Rpt. 13.

No 45915

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....1 SEP 1926

Date of writing Report 24.7.1926 When handed in at Local Office 19 Port of GLASGOW.

No. in Survey held at PORT GLASGOW. Date, First Survey 18th May Last Survey 15th July 1926.

Reg. Book.

41571. on the S. S. "ZYR"

(Number of Visits.....5.....)

Tons { Gross 5607.25
Net 3517.56

Built at PORT GLASGOW. By whom built THE CLYDE S. B. & C. Co Yard No. 350 When built 1926.

Owners PERKOMORSKA PLOVIBDA, D.D. Port belonging to SUSAK.

Electric Light Installation fitted by MESSRS CLAUD HAMILTON LTD Contract No. 360 When fitted 1926.

System of Distribution

double pole distributing fuse box

Pressure of supply for Lighting

110

volts, Heating

none

volts, Power

110

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 - 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 5 Sect. 2

Position of Generators

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

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 Same compartment

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 none and -

are they constructed wholly of durable, incombustible non-absorbent materials yes.

permanently high insulation resistance yes.

if semi-insulating material is used, are all conducting parts connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework yes.

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

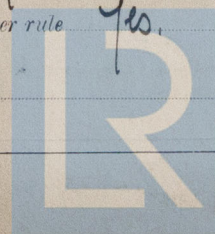
double pole main switch and fuse for dynamo and S. P. switches and D. P. fuses for circuits

Instruments on main switchboard 1 ammeters 1 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 earl lamp.

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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W229-0060 1/2

Insulation of Cables, state type of cables, single or twin *main twin* 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 *2.5'*
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 *none*.
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 *V. I. R. Lead covered in lead covered and armoured clipped to under decks in bulk heads*.
If cables are run in wood casings, are the casings and caps secured by screws *none*, 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 *yes*.
Joints in Cables, state if any, and how made, insulated, and protected *no joints*.
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 *lead*, state the material of which the bushes are made.
Earthing Connections, state what earthing connections are fitted and their respective sectional areas *—*, are their connections made as per Rule *—*.
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*.
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 *guarded*, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *none*, how are the cables led *—*, where are the controlling switches situated *—*.
Searchlight Lamps, No. of *none*, whether fixed or portable *—*, are their fittings as per Rule *—*.
Arc 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 *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 *none*, 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 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 *—*.
If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *—*.

-1 SEP 1926

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 ...	1	13	110	119	600	Compound steam engine and coupled to dynamo	—	—	
AUXILIARY ...									
EMERGENCY ...									
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	1200	34	0.064	119	30	V. I. R.	Lead and armoured
	AUXILIARY GENERATOR	—							
	EMERGENCY GENERATOR	—							
	ROTARY TRANSFORMER...	—							
	AUXILIARY SWITCHBOARDS	—							
	ENGINE ROOM	2	0040	4	0.036	11.1	6	V. I. R.	Lead and armoured
	BOILER ROOM	—							
	Pilot Bridge & Bridge	2	0040	4	0.036	15	80	V. I. R.	Armoured
	Engineers Accommodation	2	0030	3	0.036	10	30	" " "	Lead and Armoured
	Crews Accommodation	2	0030	3	0.036	11	25	" " "	" " "
	Cargo Chutes & Ld.	2	0145	4	0.052	25	150	" " "	Armoured
	" " Aft	2	0145	4	0.052	25	80	" " "	" " "
	Wireless	See below							
	Hangar	2	0045	4	0.029	9	80	" " "	Armoured
	WIRELESS	2	0040	4	0.036	15	80	V. I. R.	Armoured
	SEARCHLIGHT	2	0020	3	0.029	1	240	V. I. R.	Lead and armoured
	MASTHEAD LIGHT	2	0020	3	0.029	1	20	" " "	" " "
	SIDE LIGHTS	2	0020	3	0.029	1	20	" " "	Lead covered
	COMPASS LIGHTS	2	0020	3	0.029	1	144	" " "	" " "
	POOP LIGHTS	2	0020	3	0.029	1	6	" " "	Lead covered in tubing
	CARGO LIGHTS	2	0020	3	0.029	5		" " "	
	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	2	0040	4	0.036	9	20	V. I. R.	Lead and armoured
	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.

FOR CLAUD HAMILTON, LIMITED

W. Hamilton
Director

Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass

96 feet

Distance between electric generators or motors and steering compass

96 feet

The nearest cables to the compasses are as follows:—

A cable carrying 25 Ampères 32 feet from standard compass 24 feet from steering compass.

A cable carrying 15 Ampères 20 feet from standard compass 16 feet from steering compass.

A cable carrying 1 Ampères 3 feet from standard compass 3 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 any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

THE CLYDE SHIPBUILDING & ENGINEERING CO. LIMITED

Robert Wood

Director

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.) This installation has

been fitted on board under special survey.

Tested under full working conditions and found satisfactory.

The workmanship was found to be good and sound.

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

JWD.
1/9/26

Total Capacity of Generators 13 Kilowatts

The amount of Fee ... £ 18.0.0

When applied for.

16 Grk

Travelling Expenses (if any) £

10/6

When received,

1.9.26

J. S. Rankin.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 31 AUG 1926

Assigned

Elec. Light.

WJM



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