

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 24 FEB 1931
Received at London Office

Date of writing Report 23/2 1931. When handed in at Local Office 23/2 1931. Port of Southampton

No. in Survey held at 89698 on the *sted de vr.* Reg. Book. *BAKAR* Date, First Survey Jan 1 1931 Last Survey 19 (Number of Visits.....)

Built at *East Cowes* By whom built *J. S. White & Co. Ltd.* Yard No. 1704 When built 1931

Owners *Jadrianska Plovidba d. d.* Port belonging to *Susak*

Electric Light Installation fitted by *J. S. White & Co. Ltd.* Contract No. 1704 When fitted 1931

Is the Vessel fitted for carrying Petroleum in bulk *no.*

System of Distribution *2 mic*

Pressure of supply for Lighting *110* volts, **Heating** volts, **Power** volts.

Direct or Alternating Current, Lighting *D.C.* **Power**

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

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 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 *Main Engine Room S. side*

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 generator*

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 *S.P. switchboard*

fuses for generator, S.P. switch & S.P. fuses for each outgoing circuit.

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 *two earth lamps fitted with switches & fuses.*

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*

Cables: Single, twin, concentric, or multicore Single or 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 2-67 1/16

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 ✓

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 Mains clipped to trays, branch circuits clipped to vessel's structure & in conduit.

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 yes

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 only in branch circuits, made in lead-pipe in brass.

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 ✓

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 ✓

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 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 ✓

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected ✓

how are the cables led

where are the controlling switches situated ✓

Searchlight Lamps, No. of ✓, 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 ✓, are the coils self-contained and readily removable for replacement

are the brushes, brush holders, terminals and lubricating arrangements as per Rule, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material

are they protected from mechanical injury and damage from water, steam or oil, are their axes of rotation fore and aft

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, 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 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 ✓

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 | 6 | 110 | 55 | 600 | Steam engine | ✓ | ✓ |
| AUXILIARY ... | | | | | | | | |
| EMERGENCY ... | | | | | | | | |
| ROTARY TRANSFORMER | | | | | | | | |

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 | .040 | 19 | .052 | 55 | 64 | 12 | V.I.R. | L.C. |
| EQUALISER CONNECTIONS ... | | | | | | | | | |
| AUXILIARY GENERATOR ... | | | | | | | | | |
| EMERGENCY GENERATOR ... | | | | | | | | | |
| ROTARY TRANSFORMER MOTOR GENERATOR ... | | | | | | | | | |
| ENGINE ROOM ... | | | | | | | | | |
| BOILER ROOM ... | 1 | .0062 | 7 | .034 | 5.5 | 20 | 45 | V.I.R. | L.C. Steel wire Braided* |
| AUXILIARY SWITCHBOARDS ... | | | | | | | | | |
| ACCOMMODATION ... | 1 | .0243 | 1 | .056 | 6.25 | 10 | 200 | do | do * |
| Upper Deck ... | 1 | .0062 | 7 | .034 | 8.75 | 20 | 86 | do | do * |
| Lower Deck ... | 1 | .0062 | 7 | .034 | 7.5 | 20 | 72 | do | do * |
| Body Deck Lights | 1 | .0062 | 7 | .034 | 8.5 | 20 | 156 | do | do * |
| WIRELESS ... | | | | | | | | | |
| SEARCHLIGHT ... | | | | | | | | | |
| MASTHEAD LIGHT ... | 1 | .002 | 3 | .029 | .55 | 7.8 | 200 | do | Steel conduit |
| SIDE LIGHTS ... | 1 | .002 | 3 | .029 | 1.1 | 7.8 | 35 | do | L.C. |
| COMPASS LIGHTS ... | 1 | .002 | 3 | .029 | .46 | 7.8 | 30 | do | L.C. |
| POOP LIGHTS ... | | | | | | | | | |
| CARGO LIGHTS ... | | | | | | | | | |
| ARC LAMPS ... | | | | | | | | | |
| HEATERS ... | | | | | | | | | |

* Cables made in metric size, for Argentine government but meeting requirements mentioned in leaf.

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 ... | | | | | | | | | | |
| 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 ... | | | | | | | | | | |

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 J. SAMUEL WHITE & COMPANY, LTD.

Electrical Engineers.

Date 20 FEB 1931

W. W. W.
 MANAGING DIRECTOR

COMPASSES.

Distance between electric generators or motors and standard compass 45'
 Distance between electric generators or motors and steering compass 42'
 The nearest cables to the compasses are as follows:—
 A cable carrying 36 Ampères 2 feet from standard compass 2 feet from steering compass.
 A cable carrying 8.5 Ampères 9 feet from standard compass 6 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
 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 J. SAMUEL WHITE & COMPANY, LTD.

W. W. W.
 MANAGING DIRECTOR

Builder's Signature.

Date 20 FEB 1931

Is this installation a duplicate of a previous case *yes* If so, state name of vessel *RAB.*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Electric fittings of this vessel have been installed in accordance with the requirements of the Rules. The workmanship and materials are good. The vessel will be eligible, in my opinion, for the notation

"Electric Light"

when "insulation resistance and running order trials" have been satisfactorily carried out.

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

See light
24/2/31
L.R. Home.

Total Capacity of Generators 6 Kilowatts.

The amount of Fee ... £ 6 : : When applied for, 25/7/19 31.
 Travelling Expenses (if any) £ ✓ : : When received, 7-3-19 31.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 8 APR 1931

Assigned *Elec. Light*

Im. 1228.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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