

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 9 DEC 1930

Date of writing Report

19

When handed in at Local Office

Nov 28 1930

Port of Trieste

No. in Survey held at

Monfalcone

Date, First Survey

Oct 3

Last Survey

Nov 20 1930

Reg. Book.

91057 on the M/S J. A. Mowinkel

(Number of Visits)

Tons

Gross 12323

Net 6971

Built at Monfalcone

By whom built Cant. Rini. dell'Aristide

Card No. 236

When built 1930

Owners Baltic-Gomerik Petroleum Import Port belonging to Danzig

Electric Light Installation fitted by Cant. Rini. dell'Aristide

Contract No.

When fitted 1930

Is the Vessel fitted for carrying Petroleum in bulk yes see letter 1.8.30 and 5.9.30

System of Distribution Two wire

Pressure of supply for Lighting 110

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 no

, 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 One port one star side in E. R.

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 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 (Slake)

, 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 yes

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 see letter 1.8.30 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

link switches with fuse to each pole for generators and for all outgoing circuits (Change over switch)

Instruments on main switchboard 4 ammeters 7 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 Lamp connections

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



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002298-002304-02

Cables: Single, twin, concentric, or multicore single 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 yes
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 Lead covered and braided support fed by clips; part in tubes

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 none

Joints in Cables, state if any, and how made, insulated, and protected none

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 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

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 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 iron plate

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 one, whether fixed or portable fixed, are their fittings as per Rule yes

Are 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 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 —, 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 steel marks

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 —

The steam oil driven as replaced by steam driven 11.41 100kW
by 41888

Port set removed 5.36 replaced by set by Smith
2nd oil engine (Knapp)

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 | 435 | 270 | Diesel Engine | Diesel oil | |
| AUXILIARY ... | 1 | 45 | 220 | 200 | 500 | Steam Engine | | |
| EMERGENCY ... | | | | | | | | |
| ROTARY TRANSFORMER | 2 | 25/38 | 110/220 | 227/146 | 1600 | Electric Motor | | |

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

| No. | 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 ... | 2 | 181x2 | 37 | 2.5 | 435 | 231x2 | 40 | | rubber | Lead covered (braided) |
| EQUALISER CONNECTIONS ... | | | | | | | | | | |
| AUXILIARY GENERATOR ... | 1 | 147 | 37 | 2.25 | 200 | 202 | 40 | | " | " |
| EMERGENCY GENERATOR ... | | | | | | | | | | |
| ROTARY TRANSFORMER MOTOR ... | 1 | 100 | 37 | 1.85 | 146 | 155 | 20 | | " | " |
| 1 ENGINE ROOM...S.B. ... | 1 | 181 | 37 | 2.5 | 227 | 231 | 20 | | " | " |
| 2 BOILER ROOM...S.B. ... | 1 | 4.5 | 7 | 0.90 | 23 | 24 | 15 | | " | " |
| AUXILIARY SWITCHBOARDS in ... | 1 | 4.5 | 7 | 0.90 | 23 | 24 | 40 | | " | " |
| 3 Poop Deck cabins ... | 1 | 21.5 | 19 | 1.2 | 51 | 57 | 120 | | " | " |
| 4 Poop Deck Crew ... | 1 | 21.5 | 19 | 1.2 | 57 | 57 | 90 | | " | " |
| 6 Bridge Deck ... | 1 | 2.5 | 19 | 1.3 | 22 | 64 | 530 | | " | " |
| 7 Bridge Deck 110V. ... | 1 | 38 | 19 | 1.6 | 29 | 83 | 500 | | " | " |
| 8 Shore connection ... | 1 | 51 | 19 | 1.85 | 100 | 120 | 350 | | " | " |
| 5 ACCOMMODATION Boat Deck ... | 1 | 2.5 | 19 | 1.3 | 24 | 64 | 50 | | " | " |
| WIRELESS ... | 1 | 11.5 | 7 | 1.4 | 14 | 44 | 550 | | " | " |
| SEARCHLIGHT ... | 1 | 14 | 7 | 1.6 | 9 | 46 | 600 | | " | " |
| 5 MASTHEAD LIGHT ... | 1 | 1.3 | 3 | 0.75 | 0.22 | 7.8 | 800 | | " | " |
| 5 SIDE LIGHTS ... | 1 | 1.3 | 3 | 0.75 | 0.22 | 7.8 | 500 | | " | " |
| 5 COMPASS LIGHTS ... | 1 | 0.97 | 1 | 1.1 | 0.17 | 6 | | | " | " |
| 5 POOP LIGHTS ... | 1 | 1.3 | 3 | 0.75 | 0.26 | 7.8 | 150 | | " | " |
| CARGO LIGHTS ... | | | | | | | | | " | " |
| ARC LAMPS ... | | | | | | | | | " | " |
| HEATERS in Galley ... | | | | | | | | | " | " |

MOTOR CONDUCTORS.

| No. | 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. | | | |
| 58 BALLAST PUMP ... | | | | | | | | | | | |
| 1 MAIN BILGE LINE PUMPS ... | 1 | 1 | 14 | 7 | 1.6 | 44 | 46 | 30 | | " | " |
| GENERAL SERVICE PUMP ... | 1 | 1 | 60 | 19 | 2 | 104 | 113 | 40 | | " | " |
| 5 REFRIGERATOR PUMP ... | 1 | 1 | 1.3 | 3 | 0.75 | 4 | 7.8 | 120 | | " | " |
| 1 SANITARY PUMP ... | 1 | 1 | 4.5 | 7 | 0.90 | 12 | 24 | 35 | | " | " |
| CIRC. SEA WATER PUMPS ... | 2 | 1 | 147 | 37 | 2.25 | 192 | 202 | 60 | | " | " |
| CIRC. JACKET WATER PUMPS ... | 1 | 1 | 128 | 37 | 2.1 | 173 | 184 | 70 | | " | " |
| 5 AMMONIA COMPRESSOR ... | 1 | 1 | 4.5 | 7 | 0.9 | 20 | 24 | 120 | | " | " |
| 1 FRESH WATER PUMP ... | 1 | 1 | 4.5 | 7 | 0.9 | 7 | 24 | 40 | | " | " |
| 2 ENGINE TURNING GEAR ... | 2 | 1 | 6.5 | 7 | 1.1 | 30 | 31 | 150 | | " | " |
| LUBRIC. OIL PURIFIED ENGINE REVERSING GEAR ... | 1 | 1 | 4.5 | 7 | 0.9 | 8 | 24 | 175 | | " | " |
| 3 LUBRICATING OIL PUMPS ... | 1 | 1 | 14 | 7 | 1.6 | 42 | 46 | 170 | | " | " |
| 1 OIL FUEL TRANSFER PUMP ... | 2 | 1 | 4.5 | 7 | 0.9 | 10 | 24 | 40 | | " | " |
| WINDLASS ... | | | | | | | | | | " | " |
| WINCHES, FORWARD ... | | | | | | | | | | " | " |
| To Fuse Board in the Galley ... | 7 | 1 | 242 | 61 | 2.25 | 252 | 271 | 150 | | " | " |
| WINCHES, AFT ... | | | | | | | | | | " | " |
| Shore Connect. 220V ... | — | 1 | 147 | 37 | 2.25 | 200 | 202 | — | | " | " |
| STEERING GEAR— | | | | | | | | | | " | " |
| 1/2 h.p. (a) MOTOR GENERATOR ... | 2 | 1 | 7.5 | 37 | 1.6 | 154 | 156 | 40 | | " | " |
| " (b) MAIN MOTOR ... | 1 | 1 | 7.5 | 37 | 1.6 | 150 | 156 | 160 | | " | " |
| 6 WORKSHOP MOTORS ... | 4 | 1 | 24.5 | 72.3 | 0.9 & 0.75 | 124 | 248 | 80 | | " | " |
| 4 VENTILATING FANS ... | 2 | 1 | 4.5 | 7 | 0.9 | 12 | 24 | 130 | | " | " |
| To Fuse Board No. 1 ... | 5 | 1 | 51 | 19 | 1.85 | 83 | 120 | 20 | | " | " |
| To Fuse Board No. 2 ... | 2 | 1 | 2.5 | 19 | 1.3 | 60 | 64 | 150 | | " | " |
| To Fuse Board No. 3 ... | 2 | 1 | 2.5 | 19 | 1.3 | 50 | 64 | 160 | | " | " |
| To Fuse Board No. 4 ... | 2 | 1 | 6.5 | 7 | 1.1 | 24 | 31 | 130 | | " | " |
| To Fuse Board No. 5 ... | 2 | 1 | 11.5 | 7 | 1.4 | 24 | 44 | 120 | | " | " |
| To Fuse Board No. 6 ... | 4 | 1 | 11.5 | 7 | 1.4 | 32 | 44 | 70 | | " | " |

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The foregoing is a correct description.

Electrical Engineers.

Date _____

COMPASSES.

Distance between electric generators or motors and steering compass 270'

The nearest cables to the compasses are as follows:—

A cable carrying 3 Amperes 15 feet from standard compass 12 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. 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 none 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.)

This installation have been made under special survey in accordance with the Rules and Secretary letters. It has been tested as per Sect. 16 and found satisfactory.

It is submitted that
this vessel is eligible for
THE RECORD. *E. C.*

Glee. Light

21. 4/18/30.

Total Capacity of Generators ~~245~~ Kilowatts.

The amount of Fee ... *Five 3499* 27/11/30

Travelling Expenses (if any) £ : : When received, 22/1/32

Committee's Minute

Assigned

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

lm, 12, 28. — Transfer.

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