

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 16 MAY 1927

Date of writing Report 2nd May 1927 When handed in at Local Office

Port of Bremen

No. in Survey held at Bremen

Date, First Survey 15th Dec Last Survey 25th April 1927

Reg. Book.

88213 on the Steamer "BISCAYA"

(Number of Visits.....)

Tons { Gross 6190
Net 3536

Built at Bremen

By whom built

Deutsche Schiff- u. Maschinenbau A.G.
Werke A.G. Weser

Yard No. 399

When built 1926/27

Owners Bremer Öl-Transport G. m. b. H.

Port belonging to Bremen

Electric Light Installation fitted by Schiffsmunion Elektricitäts-Gesellschaft

Contract No.

When fitted 1926/27

System of Distribution Two-wire two-conductors

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 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 No, 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 Yes

Position of Generators in engine space

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 Yes, 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 space

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 Yes

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 Yes and Yes

are they constructed wholly of durable, incombustible 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 connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework Yes, and is the frame effectively earthed Yes

Are the following fittings as per Rule, viz.:— spacing or shielding of live parts Yes

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 Each generator

and each outgoing circuit is controlled by fuses and double pole linked switches

Instruments on main switchboard 6 ammeters 3 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 one voltmeter with ohm read and earth 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



© 2021

Lloyd's Register
Foundation

011712-011717-0163 72

Insulation of Cables, state type of cables, single or twin *twinn* are the cables insulated and protected as per Tables III or IV of the Rules *N*

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *5 volts max.*

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 *✓*

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 *metal clips and sheet iron plating*

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 VII *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 *by watertight joint boxes*

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 *yes* state the material of which the bushes are made *lead*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *the generators and frame of twin boat are earthed, area of earthing connections about 25 mm²*, 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 *✓*

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 *✓*, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *lamps contained in gas-tight fittings enclosed in gas-tight tubing*, how are the cables led *✓* where are the controlling switches situated *on deck*

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

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 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 *✓*, 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 *none*

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*

© 2021
Lloyd's Register
Foundation
0163 2/2

All Conductors are of annealed copper conforming to British Standard Specification No. 7. *Yes*
The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
The foregoing is a correct description.

SCHIFFSUNION
Des Ingenieur-Gesellschaft für Kriegs- und Handels-Schiffe
Hamburg

Electrical Engineers.

Date *11. Mai 27*
Bremen

COMPASSES.

Distance between electric generators or motors and standard compass *61 meter*

Distance between electric generators or motors and steering compass *60 - -*

The nearest cables to the compasses are as follows:—

A cable carrying *50* Amperes *7.5 meter* feet from standard compass *6 meter* 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 *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 *45* degrees on *any* course in the case of the standard compass, and *no* degrees on *any* course in the case of the steering compass.

Deutsche Schiff- und Maschinenbau Aktiengesellschaft
Work: Act. Ges. "Hansa"
Hamburg

Builder's Signature.

Date *12. Mai 1927*

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 electric installation has been fitted in conformity with the approved plans, the Secretary's letter and the requirements of the Rules. Tried under working conditions and was found in order. The materials used in the construction and the workmanship are good.

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

Elec. Light

*S.A.
17/5/27*

Total Capacity of Generators *132* Kilowatts

The amount of Fee ... £ *33 : 2* : *1.5. 27*

Travelling Expenses (if any) £ *0 : 0* : *3 June 27*

G. H. C. Kamm
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Im 8. 12. — Transfer
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



© 2021

Lloyd's Register
Foundation