

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 23/11 1928 When handed in at Local Office 10 Port of Copenhagen Received at London Office 6 DEC 1928

No. in Survey held at Odense Date, First Survey 24/9 Last Survey 15/11 1928  
Reg. Book.

89552 on the Steel Twin S. Motor vessel "Caroline Marste" (Number of Visits 6)

Built at Odense By whom built Odense Maskfabrikt Yard No. 30 Tons { Gross 7690.95  
Net 4712.67

Owners "S. Hensberg" of "S. af 1912" (as O. P. Miller) Port belonging to Fredericia When built 1928

Electric Light Installation fitted by S. Dansk Elektricitetskompani Contract No. — When fitted 1928  
Odense

System of Distribution Two conductor insulated system

Pressure of supply for Lighting 110 volts, Heating 220 volts, Power 220 volts.

Direct or Alternating Current, Lighting direct 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 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

Are the lubricating arrangements of the generators as per Rule yes

Position of Generators plant in the motor room, one in each 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 in the motor 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 of marble, 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 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 for each generator: one 266 pole circuit breaker with overload current trip & equalizer switch as per Section 3, para 3 A, clause (f). For each outgoing circuit: One 266 pole linked switch & a fuse on each pole.

Instruments on main switchboard 5 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 2 sets of earth lamps, one voltmeter fitted with a scale.

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



© 2019

Lloyd's Register

151-010242



**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

**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, uplakes or other hot objects, or to avoidable risk of mechanical damage.

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 \_\_\_\_\_.

Joints in Cables, state if any, and how made, insulated, and protected *No joints in cables*

*Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently*

....., 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

has each navigation lamp an automatic indicator as per Rule \_\_\_\_\_

**Secondary Batteries,** are they constructed and fitted as per Rule \_\_\_\_\_

Secondary Batteries, are they constructed and fitted as per Rule..... *Y*

**Fittings**, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight.

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 in pump room*  
*contained in gastight alk glass globes protected by iron grids.*  
*through galvanized iron tubes, carried gastight into fittings*  
 where are the controlling switches situated *on auxiliary switch board in the alleyway to saloon.*

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 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..... ✓

**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. *4/2.*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *only battery fed portable lamps supplied.*

© 2019  
Lloyd's Register  
WL51-01071212



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.

*N. Odenk Elektrisk Installation*  
*L. Odenk*

Electrical Engineers.

Date 1/12 - 28.

#### COMPASSES.

Distance between electric generators ~~or motors~~ and standard compass *ca. 200'*

Distance between electric generators ~~or motors~~ and steering compass *ca. 205'*

The nearest cables to the compasses are as follows:—

A cable carrying *0.2* Amperes *10"* feet from standard compass *10"* feet from steering compass.

A cable carrying *2.5* Amperes *10* feet from standard compass *14* feet from steering compass.

A cable carrying *0.4* Amperes *14* 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 *0* degrees on *any* course in the case of the standard compass, and *0* degrees on *any* course in the case of the steering compass.

PR. ODENSE STAALSKIBSVÆRFT  
VED A. P. MØLLER

*L. Odenk*

Builder's Signature.

Date

Is this installation a duplicate of a previous case *yes*. If so, state name of vessel *"1/2" Jane Mærsk"*

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

*The Electric Light & Power Installation as above described has been fitted in accord. with the Society's Rules, the approved plan (with no single alteration as shown on the corrected plan) and the requirements contained in the Secretary's letter of dated 22/3/28, the material used being of good description throughout and the workmanship of high quality.*

*Recommend the vessel to have notation of "ELECTRIC LIGHT" in the Register Book.*

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

*(S)*

*10/12/28.*

Total Capacity of Generators *200* Kilowatts.

The amount of Fee ... *£ 664.30*

When applied for,  
*4/12. 19. 28.*

Travelling Expenses (if any) £ *—*

When received,  
*7.1. 19. 29.*

*A. M. Hoff*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

*Elec Light*