

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 8 October 1935 When handed in at Local Office 8<sup>th</sup> October 1935 Port of Copenhagen.

No. in Survey held at Copenhagen Date, First Survey 11<sup>th</sup> September Last Survey 15<sup>th</sup> October 1935  
Reg. Book. 31723 on the Steel S.S. 3rd. "PETER MÆRSK" (Number of Visits.....)

Built at Odense By whom built Odense Staalskibsværk Yard No. 45 When built 1932  
Owners A/S Smedning of A/S of 1912 Port belonging to Copenhagen

Electric Light Installation fitted by Messrs. Bunnish & Wain, Esqs Contract No. - When fitted 1935

Is the Vessel fitted for carrying Petroleum in bulk no

System of Distribution 2 conductor insulated system

Pressure of supply for Lighting 220 volts, Heating - 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 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 placed in the motor room on the manoeuvring platform.

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 no woodwork 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 The existing main switch board lengthened to take the new circuit breakers

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 no woodwork

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 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 the generator: -

A. 3 pole switch with overboard & reversed current trips. For the outgoing circuits: -

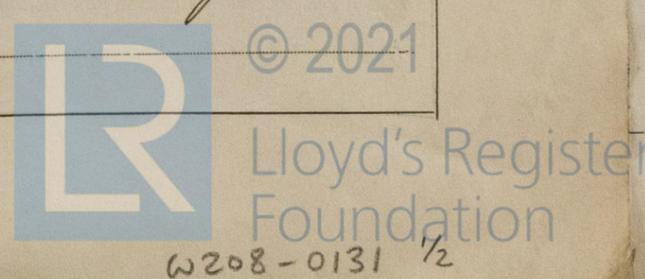
A. 2 pole switch with fuse on each pole

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 A voltmeter with ohm scale & 1 set of earth lamps (on the old part of the switch board)

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 are the cables insulated and protected as per Tables IV, V, XI or XIII of the Rules. yes

**Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load 3' roll

**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 Armoured cables used laid on steel plates - secured by steel clips

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 no joints in cable

**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 ✓ 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 ✓

**Emergency Supply,** state position and method of control of the emergency supply and how the generator is driven ✓

**Navigation Lamps,** are these separately wired ✓, controlled by separate switch and separate fuses ✓, are the fuses double pole ✓, are the switches and fuses grouped in a position accessible only to the officers on watch ✓

has each navigation lamp an automatic indicator as per Rule ✓

**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 no

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 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 yes, 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 ✓

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								
AUXILIARY	1	40	220	182	650	Cylinder "Reeder" steam engine		
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. mm.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	1	70	19	2.16	-	124	35		
EQUALISER CONNECTIONS	1	120	19	2.52	182	177	7	India rubber	Lead covered and wrapped
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
MOTOR GENERATOR									
ENGINE ROOM									
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION									
WIRELESS									
SEARCHLIGHT									
MASTHEAD LIGHT									
SIDE LIGHTS									
COMPASS LIGHTS									
POOP LIGHTS									
CARGO LIGHTS									
ARC LAMPS									
HEATERS									

**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. mm.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP FOR CONDENSED	1	1	2.5	7	0.67	12	15.5	82	India rubber	Lead covered and wrapped
CIRC. SEA WATER PUMPS 3HP	1	1	3.5	19	1.53	78	78	20	-	-
CIRC. FRESH WATER PUMPS 3HP	1	1	1.0	7	1.35	24	38	4	-	-
CH. CL. COMPRESSOR 3HP	1	1	1.0	7	1.35	24	38	4	-	-
FRESH WATER PUMP										
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT - 2 of 25HP	2	1	50	19	1.83	95	113	80	-	-
STEERING GEAR-										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										
FIRE PUMP 15HP	1	1	2.5	7	2.13	58	65	50	-	-
FAN for DRYKEY B. 7HP	1	1	1.0	7	1.35	28	38	40	-	-
Oil fuel circ. pump	1	1	2.5	7	0.67	12	15.5			

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.

BURMEISTER WÄSKIN-OG SKIBBYGGERI

*H. Blume*

Electrical Engineers.

Date \_\_\_\_\_

**COMPASSES.**

Distance between electric generators or motors and standard compass \_\_\_\_\_  
 Distance between electric generators or motors and steering compass \_\_\_\_\_  
 The nearest cables to the compasses are as follows:—  
 A cable carrying \_\_\_\_\_ Ampères \_\_\_\_\_ feet from standard compass \_\_\_\_\_ feet from steering compass.  
 A cable carrying \_\_\_\_\_ Ampères \_\_\_\_\_ feet from standard compass \_\_\_\_\_ 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.

Builder's Signature: \_\_\_\_\_ Date \_\_\_\_\_

Is this installation a duplicate of a previous case \_\_\_\_\_ If so, state name of vessel \_\_\_\_\_

General Remarks (State quality of workmanship, opinions as to class, &c.) *The extension of the electric installation as described above has been fitted under our supervision and to our satisfaction and is in accordance with the Rules. The material used and the workmanship are of good description throughout. On completion the new generator & the switch gear were tested under full load & found satisfactory.*

*Noted  
 31/10/35*

Total Capacity of Generators 40 Kilowatts.

The amount of Fee £ 90.00 { When applied for, 11.10.19.35  
 Travelling Expenses (if any) £ : : { When received, 28.10.19.35 6/11

*Surveyors* *P. Langkilde Jensen*  
 Lloyd's Register of Shipping.

Committee's Minute FRI. 1 NOV 1935 TUE. 24 DEC 1935  
 Assigned See other Rpt FRI. 17 APR 1936  
Apr 9/36 FRI. 8 MAY 1936  
TUE. 15 SEP 1936

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

© 2021 Lloyd's Register Foundation