

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 10-6, 1938 When handed in at Local Office 10-6, 1938 Port of Helsingborg
 No. in Survey held at Landskrona Date, First Survey 7-1 Last Survey 7-6, 1938
 Reg. Book. 39222 on the Steel Single Screw Motorvessel "MORVIKEN" (Number of Visits 19) Tons {Gross 5008
 Net 2987
 Built at Landskrona By whom built Ceresundsværket Yard No. 49 When built 1938
 Owners P. S. Wallem & Co. Port belonging to Bergen
 Electric Light Installation fitted by Ceresundsværket Contract No. ✓ When fitted 1938
 Is the Vessel fitted for carrying Petroleum in bulk No

System of Distribution Two wire system
 Pressure of supply for Lighting 220 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 temperature rise 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
 Have certificates of test results for machines under 100 kw. been submitted and approved Yes
 Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing 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 2 on starboard side and 1 on port side in the motor room, 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 ✓
 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 On a platform after end 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 Marble
 is all insulation of high dielectric strength and of permanently high insulation resistance Yes
 is it of an approved type Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micaite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework Yes
 is the non-hygroscopic insulating material of an approved type 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 temperature rise of omnibus bars Yes
 individual fuses to voltmeter, pilot or earth lamp Yes are moving parts of switches alive in the "off" position No
 are all screws and nuts securing connections effectively locked Yes are any fuses fitted on the live side of switches No
 Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches As per approved plan
 Are turbine driven generators fitted with emergency trip switch as per rule ✓ Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material Yes
 Instruments on main switchboard 6 ammeters 4 voltmeters ✓
 synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection Yes
 Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Ohm meter with pole switch
 Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes are the fusible cutouts of an approved type Yes have the reversed



© 2019

Lloyd's Register Foundation

W349-0181 (112)

current protection devices been tested under working conditions

Joint Boxes, Section and Distribution Boards, is the

construction, protection, insulation, material, and position of these as per rule

Cables: Single, twin, concentric, or multicore are the cables insulated and protected as per Tables IV, V, X or XI of the Rules

If the cables are insulated otherwise than as per Rule, are they of an approved type

Fall of Pressure, state maximum between bus bars and

any point of the installation under maximum load

Cable Sockets, are the ends of all cables having a sectional

area of 0.04 square inch and above provided with soldering sockets

Paper Insulated and Varnished Cambric Insulated Cables.

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with

insulating compound, or waterproof insulating tape

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 Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit

Support and Protection of Cables, state how the cables are supported and protected by steel plates and channel bars

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

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements

Joints in Cables, state if any, and how made, insulated, and protected

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands

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 storerooms 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

, how are the cables led

where are the controlling switches situated

are all fittings suitably ventilated, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials

Heating and Cooking Appliances, are they constructed and fitted as per Rule, are air heaters constructed and fitted as per Rule

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

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing

Control Gear and Resistances, are the generator

field and motor speed regulators, starters and controllers constructed and fitted as per Rule

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, are all fuses of the filled cartridge type, are they of an approved type

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	134	230	583	500	Diesel motor	Diesel oil	Above 150° F.
Emergency	2	2 x 107	230	465	500	"	"	"
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.)	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	3	450	37	2.27	583	✓	2 x 29		
AUXILIARY GENERATOR	3	360	37	2.03	465	✓	2 x 29		
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM	1	10	7	1.35	20	✓	40		
BOILER ROOM	1	150	37	2.27	219	✓	30		
AUXILIARY SWITCHBOARDS	1	25	7	2.13	60	✓	140		
Battery	1	16	7	1.71	45	✓	40		
Heaters Air	1	4	7	0.86	10	✓	40		
"	1	2.5	7	0.67	6	✓	44		
"	1	2.5	7	0.67	7.5	✓	138		
WIRELESS	1	16	7	1.71	16.5	✓	78		
SEARCHLIGHT	1	1.5	7	0.52	0.2	✓	77		
MASTHEAD LIGHT	1	1.5	7	0.52	0.2	✓	76		
SIDE LIGHTS	1	1.5	7	0.52	0.2	✓	16		
COMPASS LIGHTS	1	1.5	7	0.52	0.2	✓	20		
POOP LIGHTS	1	1.5	7	0.52	0.2	✓	98		
CARGO LIGHTS	1	10	7	1.35	20	✓	40		
ARC LAMPS									
HEATERS Fuel & Lub Oil	1	35	19	1.58	68	✓	46		
" Water	1	10	7	1.35	27	✓	46		

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.)	Insulated with	HOW PROTECTED.
		No. per Pole.	Total Nominal Area per Pole Sq. ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP	1	1	25	7	2.13	62	✓	68		
MAIN BILGE LINE PUMPS	1	1	25	7	2.13	49	✓	70		
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP	1	1	10	7	1.35	33	✓	40		
CIRC. SEA WATER PUMPS	2	1	150	37	2.27	200	✓	64		
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR	2	1	50	19	1.83	87	✓	68		
FRESH WATER PUMP	1	1	2.5	7	0.67	12.5	✓	20		
ENGINE TURNING GEAR	1	1	16	7	1.71	47.5	✓	76		
Refining Motor	1	1	10	7	1.35	33	✓	48		
ENGINE REVERSING GEAR	2	1	50	19	1.83	83	✓	78		
LUBRICATING OIL PUMPS	1	1	4	7	0.86	12.5	✓	62		
OIL FUEL TRANSFER PUMP	1	1	185	37	2.52	310	✓	190		
WINDLASS	2	1	120	37	2.03	200	✓	152		
WINCHES, FORWARD	4	1	95	19	1.53	132	✓	162		
WINCHES, AFT	2	1	120	37	2.03	200	✓	140		
	4	1	95	19	1.53	132	✓	88		
STEERING GEAR—										
(a) MOTOR GENERATOR	1	1	35	19	1.58	74	✓	150		
(b) MAIN MOTOR	1	1	4	7	0.86	12	✓	21		
WORKSHOP MOTOR	2	1	10	7	1.35	37	✓	78		
VENTILATING FANS	1	1	95	19	1.53	132	✓	66		
VEGETABLE OIL PUMP										
PURIFIER	2	1	4	7	0.86	12	✓	24		
REFR. COOL. WATER	1	1	2.5	7	0.67	8.3	✓	26		
SPARE LUBR. OIL	1	1	4	7	0.86	11.5	✓	36		
ELECTR. SLIP COUPL.	4	1	16	7	1.71	43	✓	14		

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

Hen. G. J. J.

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 *0.1* Ampères *200* ^{*m/m*} feet from standard compass *200* ^{*m/m*} 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 *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 ☒ degrees on ☒ course in the case of the standard

compass, and ☒ degrees on ☒ course in the case of the steering compass.

ÖRESUNDSVARVET

AKTIEBOLAG

E. A. Ridel

Builder's Signature.

Date *9th June 1938*

Is this installation a duplicate of a previous case *Yes* If so, state name of vessel *m/s "DAGMAR SALÉN"*

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

This electric installation has been fitted on board this vessel under my inspection and has been tested and found satisfactory.

The electric cables are manufactured by Messrs. Siemens Ltd. 7/B.

All the Rule requirements have been complied with.

Electric generators and motors as per certificates attached.

W. H. L.

12/6/38.

Total Capacity of Generators *348* Kilowatts.

The amount of Fee ... *Nm Sw 758.48* :

When applied for,
<i>10/6.</i> 19.38

Travelling Expenses (if any) £ *✓* :

When received.
<i>20.46.</i> 19.38 <i>821.6</i>

P. O. Sjogren
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 24 JUN 1938

Assigned

See Hg. J.E. 1187



© 2019

Lloyd's Register
Foundation