

JUN 30 1938

Rpt. 13.

No. 1187 D.

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office JUN 30 1938

Date of writing Report 27/6, 1938 When handed in at Local Office 27/6, 1938 Port of HELSINGBORG  
 No. in Survey held at HELSINGBORG Date, First Survey 17<sup>th</sup> March Last Survey 18<sup>th</sup> June, 1938  
 Reg. Book. 39236 on the Steel " MIRAMAR Tons { Gross 1555  
 Net 856  
 Built at Helsingborg By whom built Helsingborgs Värk AB Yard No. 58 When built 1938  
 Owners Pederis & Sörling Port belonging to Göteborg  
 Electric Light Installation fitted by Hallberg & Co, Helsingborg 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 115 ✓ volts, Heating ✓ volts, Power ✓ volts.

Direct or Alternating Current. Lighting Direct current ✓ 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 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 1 generator ✓, 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 ✓

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 On a platform starboard side in the engine 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 ✓ 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 Starboard side in the 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 ✓, 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

For the generators:— A double pole switch. ✓ For each outgoing circuit:— A double pole ✓

switch and a fuse at each pole. ✓ Are cupboards or compartments containing switchboards composed of

fire-resisting material or lined with approved material ✓ Instruments on main switchboard: One ammeter One

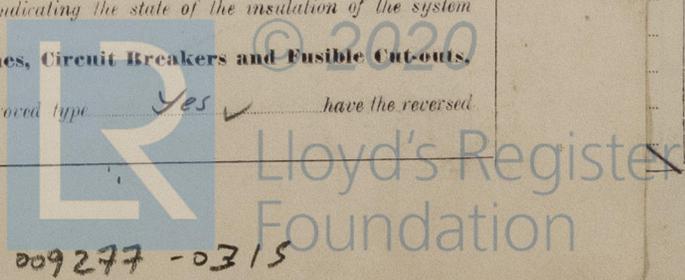
voltmeters ✓ synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

✓ Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

2 earth lamps ✓ 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

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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 Twin 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 bars and any point of the installation under maximum load As per Rule

**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 As per Rule

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 No refrigerated chambers

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

**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 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  **Emergency Supply**, state position and method of control of the emergency supply and how the generator is driven None fitted

**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

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 No

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  and

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

**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

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 Yes

### 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	5.52	115	43	700	Steam engine.		
AUXILIARY								
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 Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.			
MAIN GENERATOR	1	16 7/8	7	1.71	40.3	48.1	3		
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR									
ENGINE ROOM	1	1.5	7	0.52	2.5	9.3	20		
BOILER ROOM	1	1.5	7	0.52	2.5	9.3	20		
AUXILIARY SWITCHBOARDS	1	4	7	0.86	2	15.5	30		
NAV. LAMP CONTROL									
ACCOMMODATION AMIDS	1	4	7	0.86	11.3	15.5	20		
CREW QUARTER AFT	1	4	7	0.86	7.6	15.5	40		
MASTHEAD LIGHT, FWD	1	1.5	7	0.52	0.4	9.3	45		
" " AFT	1	1.5	7	0.52	0.4	9.3	60		
WIRELESS									
SEARCHLIGHT									
MASTHEAD LIGHT									
SIDE LIGHTS	1	1.5	7	0.52	0.4	9.3	8		
COMPASS LIGHTS	1	1.5	7	0.52	0.4	9.3	8		
POOP LIGHTS	1	1.5	7	0.52	0.4	9.3	45		
CARGO LIGHTS	1	2.5	7	0.87	5	15.7	50		
ARC LAMPS									
HEATERS									

Vulcanised rubber.  
Lead covered and armoured.

### 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 Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										

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.

Aktiefabrikt Wallberg & Co  
*M. Wallberg*

Electrical Engineers.

Date 23<sup>rd</sup> June, 1938.

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 0.3 Ampères 0.2 m. feet from standard compass 1.2 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.

Helsingborgs Värkt Aktieföretag

*M. Wallberg*

Builder's Signature.

Date 23<sup>rd</sup> June 1938.

Is this installation a duplicate of a previous case Yes. If so, state name of vessel "S/S 'IRENE'".

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

This electric installation has been fitted on board this vessel under my inspection, has been tested and found satisfactory. All the electric cables are lead covered vulcanized rubber insulated as per TABLE IV & V of the Rules and manufactured by Messrs. Siemens Hælselwisk, Sundbyberg.

All the Rule requirements have been complied with.

Noted.

B.S.B.  
1.7.38.

*L.J.*

Total Capacity of Generators 5.5 Kilowatts.

The amount of Fee ... £ No (Sw) 104.88

When applied for, 27/6, 1938

Travelling Expenses (if any) £

When received, 4/7, 1938

*MMK 5/7.*

*P.O. Logan*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 5 JUL 1938

Assigned See other T. E. report

7502.00.—Transfer.  
The Surveys are requested and to write on or below the space for Committee's Minute.



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