

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) -7 APR 1933

Received at London Office  
 Date of writing Report 4<sup>th</sup> April, 1933. When handed in at Local Office 5<sup>th</sup> April, 1933. Port of Mahms.

in Survey held at Mahms Date, First Survey 28<sup>th</sup> Oct., 1931 Last Survey 31<sup>st</sup> March, 1933.  
 (Number of Visits 18.)

on the Tinn Linn Motor Tanker "PROCYON" Tons { Gross 8721  
 Net 4954

ilt at Mahms By whom built Hockemus M. V. Aktiebolaget Yard No. 171 When built 1933.

ers Trelleborgs Angfartygs Ma Aktiebolaget Port belonging to Trelleborg.

ctric Light Installation fitted by Hockemus M. V. Aktiebolaget Contract No. ✓ When fitted 1933.

ter of rivet hole the Vessel fitted for carrying Petroleum in bulk Yes.

tem of Distribution Two wire system.

ssure of supply for Lighting 110 ✓ volts, Heating 110 ✓ volts, Power 110 ✓ volts.

ect or Alternating Current, Lighting Direct ✓ Power Direct

Alternating current system, state frequency of periods per second ✓

the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes ✓

erators, do they comply with the requirements regarding rating Yes ✓, are they compound wound Yes ✓

they over compounded 5 per cent. Yes ✓, if not compound wound state distance between each generator ✓

re more than one generator is fitted are they arranged to run in parallel Yes ✓, is an adjustable regulating resistance fitted in

es with each shunt field Yes ✓

all terminals accessible, clearly marked, and furnished with sockets. Yes ✓, are they so spaced or shielded that they cannot be accidentally earthed,

at circuited, or touched Yes ✓ Are the lubricating arrangements of the generators as per Rule Yes ✓

osition of Generators One oil engine driven on each side of the fore end of the motor space and one steam engine driven on 2<sup>nd</sup> deck stbd. side at after end of motor space. ✓

the ventilation in way of the generators satisfactory Yes ✓, are they clear of all inflammable material Yes ✓

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 ✓

their axes of rotation fore and aft Yes ✓

rthing, are the bedplates and frames of the generating plant efficiently earthed Yes ✓ are the prime movers and

r respective generators in metallic contact Yes ✓

in Switch Boards, where placed In the motor space on an athwartship platform abaft the ✓

rain engines. If the generators and main switchboard are not placed in the same compartment, is each generator provided with

use on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard ✓

itchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes ✓

they protected from mechanical injury and damage from water, steam or oil Yes ✓, if situated near unprotected

odwork or other combustible material, state distance of same horizontally from or vertically above the switchboards ✓ and ✓

they constructed wholly of durable, non-ignitable non-absorbent materials Iron ✓, is all insulation of high dielectric strength and of

manently high insulation resistance Yes ✓, if semi-insulating material is used, are all conducting parts insulated from the slab

h mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework Insulators for 5000 V. fitted. ✓

l is the frame effectively earthed. 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 ✓, proportion of omnibus

rs Yes ✓, individual fuses to voltmeter, pilot or earth lamp Yes ✓, connections of switches Yes ✓

ain Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches For each generator:-

ouble pole circuit breaker with overload and reversed current trips & a single pole equalizer switch. ✓

each outgoing circuit:- A double pole linked switch and a fuse on each pole. ✓

struments on main switchboard 8 ✓ ammeters 3 ✓ voltmeters ✓ synchronising device for paralleling purposes.

arth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Ohm meters with

indicators for both poles, lamps.

Register of Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules. Yes ✓

oint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule. Yes ✓



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 010236, 010245-0051 1/2



**Cables:** Single, twin, concentric, or multicore *main: single* are the cables insulated and protected as per Tables IV and V of the Rules *Yes*.

**Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load *less than allowed in Sec. 4, Par. 4.*

**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 *Yes*.

**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 *supported by metal clips. All cables lead covered and armoured with galv. steel tape, except in accommodations, where lead covered. Where required protected by steel sheet.*

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 VIII *Yes*.

**Refrigerated Chambers,** if lights are fitted, are the cables and fittings in accordance with the special requirements *Yes*.

**Joints in Cables,** state if any, and how made, insulated, and protected *No joints in main or power cables. For branch cables metal joint boxes and watertight glands.*

**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 brushed *Yes*. state the material of which the bushes are made *Lead*.

**Earthing Connections,** state what earthing connections are fitted and their respective sectional areas *Yes*, 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 *Yes*.

**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*.

**Secondary Batteries,** are they constructed and fitted as per Rule *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 *Lamps contained in gastight fittings. in gastight tubing. how are the cables led*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *Outside the dangerous space.*

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

**Are Lamps,** other than searchlight lamps, No. of *Yes*, are their live parts insulated from the frame or case *Yes*, are their fittings as per Rule *Yes*.

**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, most of the motors are in the motor space.*, are they protected from mechanical injury and damage from water, steam or oil *Yes, as a rule.*, 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 *Yes* and *Yes*.

**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 *Yes*.

**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. Davies hand lamp.*

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 ...	2	2-75	115	2-652	350	Heavy oil engines.	Heavy oil	Above 150°F.	
AUXILIARY ...	1	50	115	435	600	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. m.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. mm.	No.	Diameter mm.	In Circuit.	Rule.			
MAIN GENERATOR ...	3	185	37	2.52	660	700	55	Rubber	Lead covered and arm. with galv. steel tap.
EQUALISER CONNECTIONS ...		3x150	37	2.3	-	-	55	"	"
Auxiliary Generator ...	2	185	37	2.52	440	460	26	"	"
Emergency Generator ...		2x120	37	2.03	-	-	-	"	"
ROTARY TRANSFORMER MOTOR GENERATOR...									
ENGINE ROOM ...	1	16	7	1.71	40	50	30	"	"
BOILER ROOM...	1	16	7	1.71	40	50	30	"	"
AUXILIARY SWITCHBOARDS									
Light dist. board A	1	10	7	1.35	10	40	100	"	"
" " " B	1	50	19	1.83	60	100	200	"	"
" " " C	1	6	7	1.05	8	25	200	"	"
" " " D	1	16	7	1.71	30	50	60	"	"
" " " E	1	16	7	1.71	30	50	52	"	"
ACCOMMODATION ...	1	1.5	7	0.52	MAX. 5	8	MAX. 45	"	Lead covered.



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

*W. H. Lundgren* Electrical Engineers.

Date 5/4 - 1933

#### COMPASSES.

Distance between electric generators or motors and standard compass *From engine room resp. fwd. pump room to bridge.*

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.

KOCKUMS MEKANISKA VERKSTADS  
ANTIE-BOLAG

*E. Hult* Builder's Signature.

Date 5/4 - 1933

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.)

*The above described electric installation has been fitted onboard this vessel under my inspection and has been tested and found satisfactory. All the Rule requirements have been complied with. The workmanship is good.*

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

*Electric Light*

*C. H.*  
12-4-33

Total Capacity of Generators *200* Kilowatts.

The amount of Fee ... *£ 664.30* When applied for, *5th April 33.*

Travelling Expenses (if any) £ : : When received, *26.4.33*

*A. Sundén*  
Surveyor to Lloyd's Register of Shipping.

WED. 18 APR 1933

Committee's Minute

Assigned

*Electric Light*

1m. 12.23.—Transfer.  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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