

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

21 JAN 1948

Received at London Office.....

Date of writing Report 16th Jan. 48. When handed in at Local Office 20th Jan. 48. Port of Maharrö.No. in Survey held at Maharrö Date, First Survey 6th Nov. 1947 Last Survey 15th Jan. 1948.
Reg. Book No. 37437 on the M/S "TILIA GORTHON" (Number of Visits 2)Tons { Gross 1862
Net 883

Built at Maharrö By whom built Rockemann Meke. V. A. B. Yard No. 285 When built 1948

Owners Radnor A. B. & Co. Port belonging to Helsingborg.

Electrical Installation fitted by Rockemann Meke. V. A. B. Contract No. When fitted 1948.

Is vessel fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. No Sub.Sig. No.

Have plans been submitted and approved Yes System of Distribution Two wire Voltage of supply for Lighting 220

Heating 220 Power 220 Direct or Alternating Current, Lighting Direct Power Direct If Alternating Current state periodicity Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off Yes Are turbine emergency governors fitted with a

trip switch as per Rule. Generators, are they compound wound Yes, are they level compounded under working conditions Yes,

if not compound wound state distance between generators and from switchboard. Where more than one generator is fitted are they

arranged to run in parallel Yes, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole

Negative pole Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing Have certificates of

test for machines under 100 kw. been supplied Yes and the results found as per rule Yes Are the lubricating arrangements and the construction

of the generators as per rule Yes Position of Generators 2 on port and 1 on starboard side in motor room

is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situated

near unprotected combustible material state distance from same horizontally and vertically, are the generators protected from mechanical

injury and damage from water, steam and oil Yes, are the bedplates and frames earthed Yes and the prime movers and generators in metallic

contact Yes Switchboards, where are main switchboards placed On a platform on port side in

engine room, forward.

are they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam

and oil Yes, if situated near unprotected combustible material state distance from same horizontally and vertically, what insulation

material is used for the panels Main - steel, if of synthetic insulating material is it an Approved Type, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule Is the frame effectually earthed Yes

Is the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fuses

to pilot and earth lamps, voltmeters, etc., Yes, locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead"

side of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches

A double pole circuit breaker with overload and reverse current

trips and a single pole equaliser switch.

and for each outgoing circuit. A double pole linked switch and a fuse on each pole.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 8

ammeters 4 voltmeters synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection Yes Earth Testing, state means provided Ohmmeter.

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled as

per Rule Yes If circuit breakers are provided for the generators, at what overload current did they open when tested 420-440 A. are the reversed current

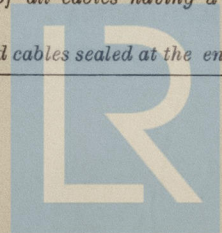
protection devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions, and at what current

did they operate 20-40 A. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes

Cables, are they insulated and protected as per the appropriate Tables of the Rules Yes, if otherwise than as per Rule are they of an approved type Yes,

state maximum fall of pressure between bus bars and any point under maximum load less than allowed in Sec. 6, are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends Yes



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 ...	3	88	230	383	450	Heavy oil engines.	Heavy oil.	Above 150° F
Harbours	1	5.5	230	24	1000	Heavy oil engine.	Heavy oil.	Above 150° F
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.								
DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or Nominal Size of Conductor Sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	88	2	70	383 ✓	400	max 30	Paper	Lead covered & armoured
EQUALISER		2	70		400	" 30	"	" "
<i>Carbon</i> "	55	1	6	24 ✓	28	36	Rubber	" "
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

GENERATOR CABLES.								
DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area of Stranded ^{Single} Cable ^{Wire} in sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	88	2	70	383 ✓	400	max 30	Paper	Lead covered & armoured.
EQUALISER		2	70		400	" 30	"	" "
"Carbon" "	5.5	1	6	24 ✓	28	36	Rubber	" "

[illegible]

WIRELESS	1	6	10	✓ 28	31	Embark	Head covered & unarmored
NAVIGATION LIGHTS	1	2.5	1	✓ 15	27	"	"
LIGHTING AND HEATING							
Mast head lights.	1	1.5	0.2	✓ 8	max. 120	"	"
Side lights.	1	1.5	0.2	✓ 8	" 40	"	"
Port lights.	1	1.5	0.2	✓ 8	75	"	"
Morse light.	1	1.5	0.2	✓ 8	20	"	"
Compass lights.	1	1.5	0.2	✓ 8	max. 20	"	"
Under oil heater.	1	10	50	✓ 58	20	Papaya	"
Under oil heater.	1	10	50	✓ 58	33	"	"
Water heater.	1	10	35	✓ 37	62	Embark	"

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Ballast pump	1	10	1	10	39.1 ✓	58	62	Paper	Lead covered & annealed
Bridge ventilating pump	1	8.2	1	10	32 ✓	37	54	Rubber	" "
Circ. sea & lubr. oil pumps	2	38	1	50	142 ✓	160	max. 55	Paper	" "
Circ. sea water pump for aux. eng.	1	4	1	4	16.5 ✓	22	67	Rubber	" "
Oil feed transfer pump	1	3.5	1	4	14.5 ✓	22	41	"	" "
" " service	1	0.6	1	1.5	2.7 ✓	3	12	"	" "
Turning gear	1	8.2	1	10	31.5 ✓	37	48	"	" "
Oil separator	2	2.5	1	2.5	10.3 ✓	15	max. 82	"	" "
Cool. water pump for fuel motor	2	1	1	1.5	4.5 ✓	8	" 17	"	" "
Circ. pump for heating	1	1	1	2.5	4.7 ✓	15	41	"	" "
Water compressor (stroke)	1	3.7	1	4	15.5 ✓	22	73	"	" "
Hydrophobic pump	2	0.9	1	1.5	4.2 ✓	8	max. 48	"	" "
Turning gear	1	6	1	6	24 ✓	28	120	"	" "
Warping machine	1	24	1	2.5	92 ✓	100	100	Paper	" "
Winches	10	24	1	3.5	120 ✓	125	max. 80	"	" "
Winchlass	1	41	1	50	152 ✓	160	94	"	" "

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
The foregoing is a correct description.

Nils E. Fleming Electrical Engineers. Date 19th Jan. 1948.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 16 fms.
Minimum distance between electric generators or motors and steering compass 13 fms.

The nearest cables to the compasses are as follows:—

A cable carrying 6 Ampères 12 feet from standard compass 9 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 0 degrees on ✓ course in the case of the standard compass, and 0 degrees on ✓ course in the case of the steering compass.

KOSKUMS
G. Lundquist Builder's Signature. Date 19th Jan. 1948.

Is this installation a duplicate of a previous case Yes If so, state name of vessel M/S "O. Örgensten", Rpt. 2401

Plans. Are approved plans forwarded herewith No If not, state date of approval 7th May, 1946.

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith Yes.

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The above described electrical equipment installation has been fitted onboard in accordance with the Rules 1939-40, approved plans and instructions and has been tested with satisfactory results.
The workmanship and material are good.

Notes see 5/3/48

Total Capacity of Generators 269.5 Kilowatts.

The amount of Fee ... Kr. 1140.- When applied for, 20-1-48
Travelling Expenses (if any) £ : : When received, 19.....

A. Boring
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 12 MAR 1948
Assigned For units see J.E. Rpt