

Report on Electrical Equipment.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report **4th Dec. 1948**, When handed in at Local Office **17th Dec. 1948**. Port of **Gothenburg**.

S No. 4.12.4

Survey held at **Gothenburg**. Date, First Survey **18th October 1948**. Last Survey **29th November 1948**.
(Number of Visits **17**)

No. in Reg. Book.

90599 on the **Motor Tanker "A.T.L.A.N.T.I.C. Q.U.E.E.N"** Tons { Gross **14567**
Net **8631**

Built at **Gothenburg** By whom built **A-B. Götaverken** Yard No. **628** When built **1948**

Owners **Rederi A-B. Monacus** Port belonging to **Kungsbacka 2088199, 2450566, 2450567** When fitted **1948**

Electrical Installation fitted by **A-B. Götaverken** Generators **XXXXXX** No. **2450567**

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

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Have plans been submitted and approved **Yes** System of Distribution **2 wire** Voltage of supply for Lighting **110**

Heating **220** Power **220** Direct or Alternating Current, Lighting **D.C.** Power **D.C.** If Alternating Current state frequency **---** Prime Movers,

has the governing been tested and found efficient when the whole 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 Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing **Yes** Have certificates of

test for machines under 100 kw. been supplied **---** and the results found as per rule **---** 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 of the engine room**

floor **---** 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 **is** main switchboards placed **On a platform on port side**

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 **Mica** 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 **Yes** 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

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

le of switches **Yes** Description of Main Switchgear for each generator and arrangement of equaliser switches **A double pole linked**

circuit breaker with overload and reversed current trips and a single pole equaliser switch interlocked with

the circuit breaker as per Rule

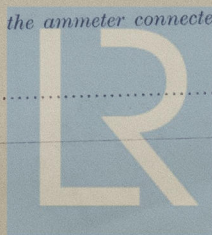
d for each outgoing circuit **A double pole switch and a fuse on each pole**

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

meters **5** voltmeters **---** synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

aliser connection **Yes** Earth Testing, state means provided **2 Ohm - meters**

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Approved in this case as per Secretary's letter dated 23rd September, 1948 (E).

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** are the reversed current protection devices connected on the pole opposite to the equaliser connection **Yes** have they been tested under working conditions **Yes** 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 **Below Rule** state maximum fall of pressure between bus bars and any point under maximum load **perm.** are the ends of all cables having a sectional area of 0.04 square inch and above provided with **bolted clamps** **Yes** Are paper insulated and varnished cambric insulated cables sealed at the exposed ends **Yes** with insulating compound **Yes** or waterproof insulating tape **Yes** Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage **Yes** are cables laid under machines or floorplates **No** if so, are they adequately protected **Yes** Are cables in machinery spaces, galleys, laundries, etc., lead covered **Yes** or run in conduit **Yes** State how the cables are supported and protected **Supported by metal clips. All power cables lead covered and armoured or steel wire braided. In accommodations lead covered and where drawn behind panels lead covered and run in conduits.** Are all lead sheaths, armoured and conduits effectually bonded and earthed **Yes** Refrigerated chambers, are the cables and fittings as per Rule **Yes** Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands **Yes** where unarmoured cables pass through beams, etc., are the holes effectively bushed **Yes** and with what material **Lead** Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule **Emergency Supply**, state position **Emergency Supply** and method of control **Emergency Supply** Navigation Lamps, are they separately wired **Yes** controlled by separate double pole switches **Yes** and fuses **Yes** Are the switches and fuses in a position accessible only to the officers on watch **Yes** is an automatic indicator fitted **Yes** Secondary Batteries are they constructed and fitted as per Rule **Yes** are they adequately ventilated **Yes** Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof **Yes** Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present **Yes** if so, how are they protected **Yes** Lamps in flame proof fittings and armoured cables in gastight piping **Outside the spaces** and where are the controlling switches fitted **Outside the spaces** are all fittings suitably ventilated **Yes** are all fittings and accessories constructed and installed as per Rule **Yes** Searchlight Lamps, No. of **Yes** whether fixed or portable **Yes** are their fittings as per Rule **Yes** Heating and Cooking, is the general construction as per Rule **Yes** are the frames effectually earthed **Yes** are heaters in the accommodation of the convection type **Yes** Motors, are all motors constructed and installed as per Rule **Yes** and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil **Yes** if situated near unprotected combustible material state minimum distance from same horizontally **Yes** and vertically **Yes** Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing **Yes** Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule **Yes** Control Gear and Resistances, are they constructed and fitted as per Rule **Yes** Lightning Conductors, where required are they fitted as per Rule **Yes** Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with **Yes** are all fuses of the cartridge type **Yes** Please see above are they of an approved type **Yes** If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type **Yes** Spare Gear, if the vessel is for open sea service have spares been provided as per Rule **Yes** are they suitably stored in dry situations **Yes** Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory **Yes**

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	2 ✓	195	220	888	330	Oil engine	Diesel oil	Above 150° F.
	1 ✓	110	220	500	450	Steam engine	---	---
EMERGENCY ROTARY TRANSFORMER	2 ✓	20	110	182	1500	Electric motor	---	---

GENERATOR CABLES.

DESCRIPTION	KILOWATTS	CONDUCTORS		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (lead plus return feet).	INSULATED WITH	HOW PROTECTED.
		No. in Parallel Per Core	Sectional Area or No. and Dia. of Strands Sq. mm.	In the Circuit	Rule			
MAIN GENERATOR	195	4	185	888	932	40 120	Rubber	Lead covered & armoured
" " EQUALISER	195	4	185	---	932	40 120	"	- " -
" " "	110	3	120	500	525	30	"	- " -
" " "	110	3	120	---	525	30	"	- " -
EMERGENCY GENERATOR	23	1	70	125	125	20 30	"	- " -
ROTARY TRANSFORMER: MOTOR	20	1	150	200	203	20 30	"	- " -
" " GENERATOR	20	1	150	200	203	20 30	"	- " -

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS							
Section boards for E.R. fans	1	6	27 ✓	29	80	Rubber	Lead covered & armoured
Section boards for purifiers	1	120	160 ✓	175	40	"	- " -
Section boards for refrigerating inst.	1	6	22.8 ✓	29	80	"	- " -
Section boards for hydrofor pumps	1	6	22.8 ✓	29	90	"	- " -
Section boards for laundry	1	2.5	3 ✓	13	100	"	- " -
Section boards for Gyro Compass & Radar	1	25	50 ✓	63	260	"	- " -

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	10	35	38	300	Rubber	Lead covered & armoured
NAVIGATION LIGHTS	1	4	10	21	280	"	- " -
LIGHTING XXXXXXXXXX							
Distribution board engine room	1	16	50	48	20	"	- " -
Distribution board accommodation amidship	1	70	100	125	240	"	- " -
Distribution board accommodation port aft	1	25	60	63	100	"	- " -
Distribution board accommodation stbd aft	1	25	50	63	100	"	- " -
Distribution board forward	1	16	10	48	300	"	- " -
HEATING							
Distribution board galley	1	70	125	125	100	"	- " -
Lubricating oil heater	1	2.5	9.1	13	30	"	- " -

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Main lubricating oil pumps ✓	3	38	1	95	143	150	80 80 80	Rubber	Lead covered & armoured
Main cooling water pump ✓	2	80	2	95	294	300	40 40	"	- " -
Manoeuvring air compressor ✓	2	60	1	185	224	233	110 110	"	- " -
Aux. eng. cooling water pump ✓	1	8	1	10	35	38	50	"	- " -
Fuel oil transfer pump ✓	1	15	1	25	58	63	100	"	- " -
Ballast pump ✓	1	18	1	35	69	78	100	"	- " -
Bilge- and sanitary pump ✓	1	12	1	16	48	48	100	"	- " -
Workshop motor ✓	1	3	1	2.5	12.5	13	50	"	- " -
Steering gear ✓	2	25	1	50	95	99	180 180	"	- " -
Hot water pump	2	2.5	1	2.5	10	13	20 20	"	- " -
Hydrofor pumps	2	3	1	2.5	12.5	13	30 30	"	- " -
Fuel oil pump ✓	1	1.5	1	1.5	9.5	7	30	"	- " -
Turning motor ✓	1	12	1	16	49	48	70	"	- " -
Purifiers	2	8.5	1	10	34	38	20 20	"	- " -
Purifiers ✓	1	6	1	6	23.6	29	20	"	- " -

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.

[Signature] **AKTIEBOLAGET GOTÄVERKEN** Electrical Engineers. Date **DEC. 10TH 1948**

COMPASSES.

Minimum distance between electric generators or motors and standard compass

Minimum 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 **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 **every** course in the case of the

standard compass, and **0** degrees on **every** course in the case of the steering compass.

[Signature] **AKTIEBOLAGET GOTÄVERKEN** Builder's Signature. Date **DEC. 10TH 1948**

Is this installation a duplicate of a previous case **No** If so, state name of vessel

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

This electrical equipment has been fitted in accordance with the Rules and approved plans.

The workmanship and material are good. Generators have been inspected by the Stockholm and Copenhagen surveyors during construction and testing and test certificates for electric motors intended for essential services are attached.

The installation was megger tested throughout, examined under full working power condition and found to work satisfactorily.

Noted J.S. 21-1-49

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

Total Capacity of Generators **500** Kilowatts.

The amount of Fee **(Got.) Kr. 1174:00** When applied for, **17/12 19. 48**
(Skm.ac.) 276:00
Travelling Expenses (if any) Kr. **54:45** When received
(Stockholm account) 19.....

[Signature]
Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 28 JAN 1949**

Assigned *For minute see J.L. Rpt*