

Report on Electrical Equipment.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office **18 FEB 1948**

Date of writing Report **14th Febr 1948**. When handed in at Local Office **16th Febr. 1948**. Port of **Gothenburg**.

Survey held at **Gothenburg**. Date, First Survey **21st July 47** Last Survey **6th February 1948**.
No. in Reg. Book. (Number of Visits **20**)

19310 on the **Motorship "A N N I E J O H N S O N"** Tons { Gross **5017**
Net **2879**

Built at **Gothenburg** By whom built **A-B. Götaverken** Yard No. **392** When built **1925**

Owners **Rederi A-B. Nordstjernan** Port belonging to **Stockholm**
partly

Electrical Installation/fitted by **Barthold Edén** 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 system** Voltage of supply for Lighting **220**

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 **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 **All on the port side on 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 are main switchboards placed **On a platform in the aft end of the engine room between**

the main engines

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 (~~stucco~~ 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

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 two pole circuit breaker**

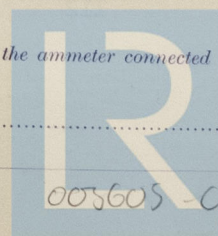
with overload and reversed current trip gear.

and for each outgoing circuit **A double pole 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 **7**

ammeters **6** 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 **Ohm - meter**



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Switches, Circuit Breakers and Fuses, are they as per Rule Yes are the reversed current protection devices connected on the pole opposite to the equaliser connection Yes are the fuses an approved type Yes are all fuses labelled as per Rule Yes are they tested under working conditions Yes Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes have they been tested as per Rule Yes 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 full of pressure between bus bars and any point under maximum load Yes 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 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. In holds protected by sheet steel covers.

Are all lead sheaths, armouring 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 the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position Alternative Lighting, are and method of control 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 installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present No if so, how are they protected and where are the controlling switches fitted are all fittings and accessories constructed and installed as per Rule Yes Searchlight Lamps, No. of 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 and vertically 100 BHP intended for essential services been supplied and the results found as per Rule Yes Have certificates of test for motors under 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 are they of an approved 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	110	220	500	600	Heavy oil engine	Diesel oil	Above 150° F.
	1	112	220	509	500	Heavy oil engine	Diesel oil	Above 150° F.
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION	KILOWATTS	CONDUCTORS		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (feet plus return)	INSULATED WITH	HOW PROTECTED.
		No. in Parallel Per Pole	Sectional Area Sq. mm.	In the Circuit	Rule			
MAIN GENERATOR	110	3	120	500	525	45 - 25	Rubber	Lead covered & armoured.
" " EQUALISER		3	120	---	525	---	"	"
MAIN GENERATOR	112	3	120	509	525	35	"	"
" " EQUALISER		3	120	---	525	---	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

MAIN DISTRIBUTION CABLES							
AUX. SWITCHBOARDS AND SECTION BOARDS							
<u>New installation:</u>							
Water heater	1	95	136	150 ✓	40	Rubber	Lead covered & armoured.
Fans	1	16	35	48 ✓	12	"	- " -
Tricloretylen app.	1	2.5	10	12.8	—	"	- " -

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS Re-wired	1	2.5	1.5	12.8	---	Rubber	Lead covered & armoured.
NAVIGATION LIGHTS Re-wired	1	6	18	29.4	---	"	"
LIGHTING XXXXXXXXXX	1	6	18	29.4	---	"	"
New accommodation in fore-castle	1	4	8	22.2	---	"	"
Officers' accommodation (re-wired)	1	4	8	22.2	---	"	"
New passenger accommodation on main dk, p.	1	6	12.5	29.4	---	"	"
New passenger accommodation on main dk, s.	1	6	12.5	29.4	---	"	"
New accommodation aft	1	95	98	150	---	"	"
HEATING:	1	50	70	98	---	"	"
New accommodation in fore-castle	1	50	70	98	---	"	"
Amidship	1	50	65	98	---	"	"
Aft							

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
New motors now fitted:								
Manoeuvring compressors	2	55	2	70	210	247	35	Rubber Lead covered & armoured.
Cables to windlass and winches renewed.								
Remaining electric motors with cables overhauled as necessary.								

Please see plans approved on the 24th November, 1947, and the Secretary's letter dated the 17th November, 1947, initialled "E", and our letter dated the 19th November, 1947.

NOTE: The harbour lighting set, shown on plan No. 337 has not been fitted.

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.

..... Electrical Engineers. Date

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 degrees on every course in the case of the

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

..... Builder's Signature. Date

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 installation has been completely overhauled and partly renewed.

The workmanship is good and all the Rule requirements have been complied with.

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

Total Capacity of Generators 332 Kilowatts.

The amount of Fee Alt. ... Kr. 200:00

Travelling Expenses (if any) Kr. ---

When applied for,
16/2 1948.
When received
--- 19....

Sten Johansson
Surveyor to Lloyd's Register of Shipping.

WED 10 MAR 1948

Committee's Minute

Assigned See lot 15849