

# Report on Electrical Equipment.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 14.10., 1941. When handed in at Local Office ..... 19..... Port of STOCKHOLM.

No. in Survey held at Stockholm ..... Date, First Survey 8.4., ..... Last Survey 21.7., ..... 1941.  
Reg. Book. (Number of Visits 10.....)

..... on the Steel Sc. Motortanker "GIAN" ..... Tons {Gross 640  
Net 362

Built at Stockholm ..... By whom built A/B Ekensbergs Varv ..... Yard No. 177 ..... When built 1941 .....

Owners Rederi A/B Transocean ..... Port belonging to Gothenburg .....

Electrical Installation fitted by Allmänna Svenska Elektriska A.-B. ..... Contract No ..... - ..... When fitted 1941 .....

Is vessel fitted for carrying Petroleum in bulk Yes Is vessel equipped with D. F. .... - ..... E. S. D. .... - ..... Gy. C. .... - ..... Sub. Sig. .... - .....

Have plans been submitted and approved Yes. System of Distribution Two wire system. Voltage of supply for Lighting 115 .....

Heating ..... - ..... Power 115v. Direct or Alternating Current, Lighting Direct Power ..... - ..... 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 No ....., 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 In the Engine 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 ..... Swithboards, where are main switchboards placed In the Engine Room. .....

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 Bakelite ....., 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 double pole circuit breaker .....

For generator 25 KW ; A double-pole overload circuit-breaker. .....

For generator 5 KW ; A double-pole linked switch and a fuse on each pole. .....

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 ..... Instruments on main switchboard 3 .....

ammeters 2 ..... voltmeters ..... - ..... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection ..... - ..... Earth Testing, state means provided Ohm meter fitted. .....



W170-0181 (1/27)

Switches, Circuit Breakers and Fuses, are they as per Rule **Yes** are the fuses an approved type **Diaged** 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 **Yes**, state maximum fall of pressure between bus bars and any point under maximum load **3.6 v.** 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 clips, armoured and lead covered.**

Are all lead sheaths, armoring 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 effectually bushed **Yes** and with what material **Lead** Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule **Yes** Emergency Supply, state position **None** and method of control **None**

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 **see letter** 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 **see letter.**

and where are the controlling switches fitted **see letter.** are all fittings suitably ventilated **Yes** are all fittings and accessories constructed and installed as per Rule **Yes** Searchlight Lamps, No. of **None**, whether fixed or portable **None** are their fittings as per Rule **None** Heating and Cooking, is the general construction as per Rule **None**

are the frames effectually earthed **None**, are heaters in the accommodation of the convection type **None** 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 **None** and vertically **None** 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** are they of an approved type **Diaged** If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type **None** fids 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	One	25.0	115	218.0	800	Belt from Aux. Engine	Diesel Oil	80° C.
	One	5.0	110	45.5	920	Belt from Aux. Engine	Diesel Oil	80° C.
EMERGENCY ROTARY TRANSFORMER								

**GENERATOR CABLES.**

DESCRIPTION	KILOWATTS	CONDUCTORS		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (lead plus return feet) met.	INSULATED WITH	HOW PROTECTED.
		No. in Parallel Per Pole	Sectional Area or No. and Dia. of Strands sq. mm.	In the Circuit	Rule			
MAIN GENERATOR	25	2	140.0	218.0	250.0	12.0	Rubber	Lead covered and armoured.
Aux. " "	5	1	16.0	45.0	50.0	28.0	"	" "
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

**MAIN DISTRIBUTION CABLES.**

AUX. SWITCHBOARDS AND SECTION BOARDS								
A. Engine Room	1	6.0	10.0	28.0	1.0	Rubber	Lead covered and armoured.	
B. Saloon etc. Aft	1	10.0	23.0	37.0	13.0	"	" "	
C. Bridge (navigation lights)	1	4.0	3.0	22.0	10.0	"	" "	

**LIGHTING AND HEATING, ETC., CABLES.**

WIRELESS	1	6.0	7.25	28.0	30.0	Rubber	Lead covered and armoured.
NAVIGATION LIGHTS	1	1.5	1.0	6.5	45.0	"	" "
LIGHTING <del>and heating</del> (Aft)	1	1.5	2.0	6.5	14.0	"	Lead covered
Oil Heater	1	6.0	13.0	28.0	12.0	"	Lead covered and armoured.

**MOTOR CABLES.**

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Windlass	1	16	1	70.0	127	124	110	Rubber Lead covered and armoured. (Intermittent)
Oil Separator	1	0.8	1	2.5	6.6	15.5	15	" Lead covered and armoured.

W170-0181 (2/2)

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.

ALLMÄNNNA SVENSKA ELEKTRISKA ANTIKBEHÖRAGET  
 FILIALEN STOCKHOLM

*J. Melander*

Electrical Engineers. Date .....

**COMPASSES.**

Minimum distance between electric generators or motors and standard compass ..... **9 met.**

Minimum distance between electric generators or motors and steering compass ..... **7 "**

The nearest cables to the compasses are as follows: —

A cable carrying **0.3** Ampères **One** ~~met.~~ **met.** from standard compass ..... **3** ~~met.~~ **met.** from steering compass. **Morse Lamps.**

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 ..... **None.**

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.

**A.-B. EKENSBERGS VARV**

*[Signature]* 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 electric installation has been fitted on board under my supervision and to my satisfaction. The workmanship is good and the Rule Requirements have been complied with, with the exception of the items stated in the attached letter. The Makers' certificates in respect of generators and of motor for windlass are attached hereto.**

Total Capacity of Generators ..... **30** ..... Kilowatts.

The amount of Fee ... **x Kr.: 428** { When applied for, **15.10.41.**  
 Travelling Expenses (if any) £ : : { When received .....19.....

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

Committee's Minute .....  
 Assigned .....

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

