

Report on Electrical Equipment.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 21.10, 42. When handed in at Local Office 19..... Port of Stockholm.

No. in Survey held at Stockholm Date, First Survey 31.8, Last Survey 21.9, 1942.
Reg. Book. (Number of Visits..... 8.)

on the Motor-tanker "DIVINA" Tons {Gross 643
Net 383

Built at Stockholm By whom built A.-B. Ekensbergs Varv Yard No. 178 When built 1942.

Owners Rederi A.-B. Diana Port belonging to Stockholm

Electrical Installation fitted by A.S.E.A. Contract No. When fitted 1942

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 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 Steel plates & 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 See plan 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 ~~.....~~

For generator 30 KW A double-pole overload circuit breaker.

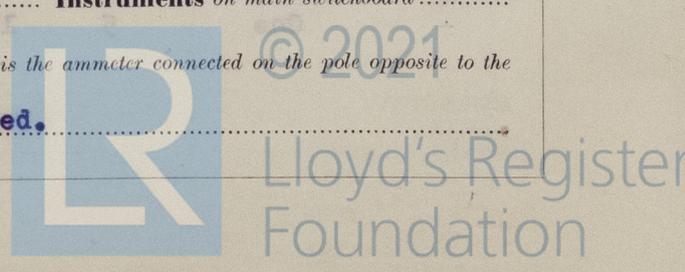
" " 5 " A double-pole linked switch and a fuse on each pole.

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 Three

ammeters Two 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.



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 have they been tested under working conditions **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 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 0.01 square inch and above provided with soldering sockets **Yes** Are paper insulated and varnished cambric insulated cables sealed at the exposed ends with insulating compound or waterproof insulating tape 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 Are cables in machinery spaces, galleys, laundries, etc., lead covered **Yes** or run in conduit State how the cables are supported and protected **The cables are supported by clips and armoured. They are led through pipes where necessary.**

Are all lead sheaths, armouring and conduits effectually bonded and earthed **Yes** Refrigerated chambers, are the cables and fittings as per Rule 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 **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, ~~scuttles~~ 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 **No**, if so, how are they protected and where are the controlling switches fitted 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 are their fittings as per Rule **Heating and Cooking**, is the general construction as per Rule are the frames effectually earthed are heaters in the accommodation of the convection type **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 **Motors under 100 BHP** Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing 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 fitted** **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	30	115	261.0	860/800	Belt from Aux. Engine	Diesel Oil 80° C.	
	One	5	110	45.5	920	" " " "	" " " "	
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION	KILOWATTS	CONDUCTORS		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (lead plus return feet) metres	INSULATED WITH	HOW PROTECTED.
		No. in Parallel Per Pole	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit	Rule			
MAIN GENERATOR	30	2	140	261	260	12	Vulc. rubber	Lead covered and armoured.
Aux.	5	1	16	45.5	50	28	" "	" "
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS								
A. Engine room	1	4	10	22	1	" "	" "	" "
B. Saloon etc. aft	1	10	23	37	13	" "	" "	" "
C. Bridge (navigation lights)	1	4	3	22	10	" "	" "	" "

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS								
NAVIGATION LIGHTS	1	1,5	1	7	45	" "	" "	" "
LIGHTING AND HEATING	1	1,5	2	7	14	" "	Lead covered	" "
Oil heater	1	6,0	13	28	12	" "	Lead covered and armoured.	" "
Secondary Battery	1	6,0	20	28	24	" "	" "	" "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Windlass	1	16	1	70,0	127	130	110	" "
Oil separator	1	0,8	1	2,5	6,7	15,5	15	" "
Motor for KAMEWA-propeller	1	1,5	1	6,0	13	28,0	27	" "

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 ÅRTIEDLAGET
 FILIALEN STOCKHOLM

J. M. Ekensberg

Electrical Engineers. Date 21st Oct., 1942.

COMPASSES.

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

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 three ~~met.~~ ^{met.} 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 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

J. Ekensberg

Builder's Signature. Date 21st Oct. 1942.

Is this installation a duplicate of a previous case Yes If so, state name of vessel Tanker "GLAN".

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

This electrical equipment has been fitted onboard under my supervision and to my satisfaction.

The workmanship is good and 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 35 Kilowatts.

The amount of Fee ...	Kr. 451:--	{ When applied for, 22.10. 42.19..... When received19.....
Travelling Expenses (if any) £	:	

R. J. Anderson
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

