

pt. 13.

No. 24300

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

17 AUG 1958

Date of writing Report 19/7 19 58 When handed in at Local Office 9/8 19 58. Port of Gothenburg.

No. in Survey held at Gothenburg Date, First Survey 16/5-58 Last Survey 9/7 19 58. (No. of Visits 22.)

44708 on the Single Screw Motor Tanker "S I G N E I N G E L S S O N" Tons { Gross 12615 Net 7304

Built at Gothenburg By whom built A/B Götaverken Yard No. 728 When built 1958

Owners A/B Transmarin Port belonging to Hälsingborg

Installation fitted by A/B Götaverken When fitted 1958

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

Plans, have they been submitted and approved Yes System of Distribution 2 wire Voltage of Lighting 110 V ER 220 V

Heating 220 V. Power 220 V. D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency ---

Prime Movers, has the governing been found as per Rule when full load is thrown on and off Yes Are turbine emergency governors fitted with a trip switch --- Generators, are they compound wound Yes, and level compounded under working conditions Yes

Are the generators arranged to run in parallel Yes Is the compound winding connected to the negative or positive pole Negative

Have machines 100 kw. and over 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 Yes Position of Generators One on starboard side and two on port side on floor plate.

Is the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil Yes Switchboards, where are main switchboards placed On a platform on port side in Engine Room.

Are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil Yes, what insulation 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 --- Is the construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear for each generator and arrangement of equaliser switches A double link circuit breaker with overload and reversed current trips and a single pole equaliser switch interlocked with the circuit breaker.

727 234 and the switch and fuse gear (or circuit breakers) for each outgoing circuit A double pole switch and a fuse in each pole.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 9 ammeters 5 voltmeters --- synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided Ohm

Preference Tripping, state if provided Yes, and tested Yes

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes

Make of fuses A.S.E.A, are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 20% overload, and at what current do the reverse current protective devices operate 10 - 15%

Cables, are they insulated and protected as per Rule Yes 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 Below Rule permit. volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends ---

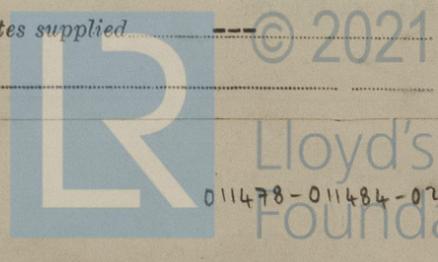
Are all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage Yes, are any cables laid under machines or floorplates Yes, if so, are they adequately protected Yes State type of cables (if in conduit this should also be stated) in machinery spaces LC & A, LC & SWB, galleys LC & A, LC & PVC

and laundries LC & PVC State how the cables are supported or protected Supported by metal clips. All power cables lead covered and armoured or steel wire braided. Lighting cables in accommodation LC & PVC even where drawn behind panels and run in conduits.

Are all lead sheaths, armouring and conduits effectually bonded and earthed 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 Refrigerated chambers, are the cables and fittings as per Rule Yes

Have refrigeration fan motors been constructed under survey Provision only and test certificates supplied ---

Are the motors accessible for maintenance at all times ---



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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches 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 Is an alternative supply provided Yes

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule ---, state battery capacity in ampère hours --- Where required to do so does it comply with 1948 International Convention ---

Lighting, is fluorescent lighting fitted No If so, state nominal lamp voltage --- and compartments where lamps are fitted ---

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes

Searchlights, No. of 1, whether fixed or portable Portable, are they of the carbon arc or of the filament type Filament

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 and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil Yes

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment 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 sea services been supplied and the results found as per Rule Yes

Lightning Conductors, where required are they fitted as per Rule ---

Ships carrying Oil having a Flash Point of less than 150° F. Have all the special requirements of the Rules for such ships been complied with Yes, are all fuses of an Approved Cartridge Type Yes, make of fuse A. S. E. A. Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships Yes Are all cables lead covered as per Rule Yes

E.S.D., if fitted state maker Atlas Echolot location of transmitter and receiver Engine Room cofferdam for an engine

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations Yes

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory Yes

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				TYPE.	PRIME MOVER.
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN	2	E. S. A. B.	240	220	1090	350	Diesel	A/B Götaverken
	1	- " -	110	220	500	450	Steam eng.	Öresundsvarvet A/B
EMERGENCY ROTARY TRANSFORMER	2	E. S. A. B.	20	110	182	1700	El. motors	E. S. A. B.

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet) mtr.	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. mm. or sq. in.	In the Circuit.	Rule.			
MAIN GENERATOR	2	240	5	185	1090 ✓	1175	80-30	Rubber	LC & A.
" EQUALISER			5	185	1090 ✓	1175	80-30	"	"
"	1	110	3	120	500 ✓	525	40	"	"
"			3	120	500 ✓	525	40	"	"
EMERGENCY GENERATOR									
ROTARY TRANSFORMER : MOTOR	2	23	1	70	122 ✓	125	20-20	"	"
" GENERATOR	2	20	1	150	182 ✓	205	20-20	"	"

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No. of	Kw.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. mm. or sq. in.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet) mtr.	INSULATION.	PROTECTIVE COVERING.
Triclore evaporator	1	10		33	✓	38	30	Rubber	Lead covered & armoured
Workshop	1	10		23	✓	38	30	"	"
Purifiers lubr. oil	1	50		83	✓	99	50	"	"
Cooling fuel oil pumps	1	6		22	✓	29	30	"	"
Purifiers diesel & heavy fuel oil	1	70		105	✓	125	70	"	"
Hydrofor pumps	1	16		36	✓	49	90	"	"
Hot water circ. pumps	1	10		24	✓	38	80	"	"
Refr. inst. (Provision)	1	16		40	✓	49	100	"	"
E.R. fans	1	70		114	✓	125	70	"	"
Galley	1	150		160	✓	205	120	"	"
Laundry	1	16		45	✓	49	100	"	"
Air condition	1	150		145	✓	205	80	"	"



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.

AKTIEBOLAGET GÖTAVERKEN

Electrical Contractors.

Date 5/8 1958

Helv. Brundin

COMPASSES.

Have the compasses been adjusted under working conditions Yes.

AKTIEBOLAGET GÖTAVERKEN

Builder's Signature.

Date 5/8 1958

Helv. Brundin

Have the foregoing descriptions and schedules been verified and found correct Yes.

Is this installation a duplicate of a previous case --- If so, state name of vessel ---

Plans. Are approved plans forwarded herewith No If not, state date of approval 3/5 -58.

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

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.)

This electric installation has been fitted under my inspection and to my satisfaction in accordance with the Rules and approved plans.

The workmanship and material used are good.

Generators and motors above 100 KW. have been built under Special Survey as per certificates attached.

Total Capacity of Generators 590 Kilowatts.

The amount of Fee ...	Kr. 1960:-	When applied for,
Generators	Kr. 500:-	
Travelling Expenses (if any)	Kr. 123:-	When received,
		9/8 19 58
		--- 19 ---

Erland Jansson
 Surveyor to Lloyd's Register of Shipping.

FRIDAY - 5 SEP 1958

Committee's Minute

Assigned *See Rpt. 1*

5m. 0.56 - Transfer. (MADE AND PRINTED IN DENMARK)
 (The Surveyors are requested not to write on or below the space for Committee Minute.)

12.8.58
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