

Report on Electrical Equipment.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 24 MAY 1944

Date of writing Report 9th May, 1944. When handed in at Local Office 19th May, 1944. Port of Gothenburg.
 No. in Survey held at Gothenburg. Date, First Survey 26th Jan. Last Survey 14th April 1944.
 Reg. Book 39782 on the Single Screw Motor Ship "SAVON" Tons Gross 5414 Net 3057
 Built at Gothenburg By whom built A-B. Götaverken Yard No. 589 When built 1944
 Owners Trafik A-B. Grängesberg-Oxelösund Port belonging to Stockholm
 Electrical Installation fitted by A-B. Götaverken Contract No. 589 When fitted 1944
 Is vessel fitted for carrying Petroleum in bulk No. Is vessel equipped with D. F. Yes. E. S. D. Yes. G. No. Sub. Sig. No.

Have plans been submitted and approved Yes. System of Distribution Two wire Voltage of supply for Lighting 220.
 Heating Power 220 Direct or Alternating Current, Lighting DC Power DC 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 turbines 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 on engine room floor, 2 on P. side, 1 on S. side.
 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 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 marble insulated with mica if synthetic insulating material is it an Approved Type Is the frame effectually earthed Yes
 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
 to pilot and earth lamps, voltmeters, etc. Yes locking of screws and nuts Yes labelling of apparatus and fuses Yes fuses on the leads
 side of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches A double pole
 circuit breaker with overload and reverse current trips and a single pole equaliser switch
 interlocked as per Rule
 and for each outgoing circuit A double pole switch and a fuse on each pole

Are compartments containing switchboards constructed of fire-resisting material as per rule Yes Instruments on main switchboard 7
 4 instruments For compound instrument in parallel to the ammeter connected to the main switchboard
 earth binding, suitably protected On-meter



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GENERATOR CABLES.

DESCRIPTION	AMPERES	CONDUCTORS	MAXIMUM CABLE SIZE	APPROX. LENGTH	INSULATION	HOW PROTECTED
MAIN GENERATOR	110	3	120	500	52.5	44-26- Rubber Lead covered and armoured
" " EQUALIZER		3	120	52.5	44-26-	" " "
HARBOUR LIGHTING SET	5	1	4	22.7	22.2	20 " " "
EMERGENCY GENERATOR						
ROTARY TRANSFORMER MOTOR						
" " GENERATOR						

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS	No. of	AMPERES	CONDUCTORS	MAXIMUM CABLE SIZE	APPROX. LENGTH	INSULATION	HOW PROTECTED
Separators	1	50	84	98	60	"	" " "
Water heaters	1	6	25	29.4	20	"	" " "
Galley board	1	95	134	150	80	"	" " "

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	6	15	29.4	100	"	" " "
NAVIGATION LIGHTS	1	1.5	2	6.5	100	"	" " "
LIGHTING XXXXXXXX Deck aft	1	4	10	22.2	30	"	" " "
" " forward	1	6	18	29.4	80	"	" " "
Midships	1	10	24	38.2	100	"	" " "
Motor room	1	4	18	22.2	10	"	" " "
Accommodation aft	1	10	26	38.2	160	"	" " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED	No.	H.P.	AMPERES	CONDUCTORS	MAXIMUM CABLE SIZE	APPROX. LENGTH	INSULATION	HOW PROTECTED
Forward ballast pump	1	30	1	70	112	123.6	52	" " "
After ballast pump	1	40	1	95	150	150	60	" " "
Cooling water pump	2	52	1	150	190	202	52-50	" " "
Lubricating oil pump	2	45	1	120	168	175	50-48	" " "
Turning gear	1	8	1	10	31.7	38.2	100	" " "
Bilge and sanitary pump	1	9	1	10	35	38.2	70	" " "
Refrigerator	1	5	1	6	20	29.4	40	" " "
Cooling pump for refig.	1	0.7	1	1.5	3	6.5	36	" " "
Steering gear	29	1	70	115	150.2	180	"	" " "
Transfer pump	1	9	1	10	35	38.2	84	" " "
Aux. eng. cooling pump	1	7	1	6	31	29.4	30	" " "
Lubricating oil separator	1	3.5	1	4	14.2	22.2	20	" " "
Lubricating oil separator	1	2.5	1	2.5	10.6	12.8	20	" " "
Fuel oil separator	1	3.5	1	4	14.2	22.2	18	" " "
Ventilating fans	2	2.6	1	2.5	10.5	12.8	100-100	" " "
Fresh water pump	1	3	1	2.5	12.3	12.8	18	" " "
Salt water pump	1	3	1	2.5	12.3	12.8	20	" " "
Workshop motor	1	3	1	2.5	12.5	12.8	80	" " "
Circ. pump for ex. gas boiler	1	0.6	1	1.5	2.85	6.5	30	" " "
Windlass & winches I & II	1-2	65.24	1	150	243-184	280	260	" " "
Winching winch & winches I & II	1-2	24	1	70	92-184	150.2	230	" " "
Winches III & IV	2	24	1	70	184	150.2	100	" " "
Winches III & IV	2	24	1	70	184	150.2	140	" " "
Winches 7	2	24	1	70	184	150.2	90	" " "
Winches VI	2	24	1	70	184	150.2	170	" " "

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 equalizer 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... state maximum fall of pressure between bus bars and any point under maximum load... (8.8 V. for lighting 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 in the exposed ends... with insulating compound... or waterproof insulating tape... Are all the cable runs in recessed 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... Yes... if so, are they adequately protected... Yes... Are cables in machinery spaces, galleys, lavatories, etc., lead covered... Yes... or run in conduits... State how the cables are supported and protected... supported by metal clips... All power cables lead covered and armoured... Refrigerated chambers, are the cables and fittings as per Rule... Yes... Are all lead sheaths, armoring and conduits effectively bonded and earthed... Yes... where unarmoured cables pass through beams, etc., are the holes effectively bashed... 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... 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 regulated... Fittings, are all fittings on weather decks, in storerooms 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... are all fittings suitably insulated... and where are the controlling switches fitted... Searchlight Lamps, No. of... No... whether fitted... are all fittings and accessories constructed and installed as per Rule... Heating and Cooking, is the general construction as per Rule... Yes... are their fittings as per Rule... Motors are all motors constructed and are the frames effectively earthed... Yes... are heaters in the accommodation of the convection type... Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing... Have certificates of test for motor motor 100 BHP intended for essential services been supplied and the results found as per Rule... Yes... Control Gears and Resistances, are they constructed and fitted as per Rule... Yes... Lightning Conductors, where required are they fitted as per Rule... Yes... Steps carrying ORT, are they fitted as per Rule... less than 150 F. Have all the special requirements of the Rules for such ships been complied with... are all steps of the ORT, are they of an approved type... If portable lamps for use in dangerous spaces are supplied, are they of an approved type... Spare Gear, if the vessel is for open sea service have spares been provided as per Rule... Insulation Tests, has the insulation resistance of all circuits and apparatus been measured before departure... Insulation Tests, has the insulation resistance of all circuits and apparatus been measured before departure...

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR	No. of	Rated at	Volts	Amperes	Watts per H.P.	Remarks
MAIN	3	110	220	500	450	Diesel engines
Harbour lighting set	1	5	220	22.7	1000	Diesel engine
EMERGENCY ROTARY TRANSFORMER						

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 and operated in the R.M.S.

The foregoing is a correct description.

ANTHONY J. MATTHEWS

..... Electrical Engineer Date

COMPASSES.

Minimum distance between electric generators or motors and standard compass About 15 metres

Minimum distance between electric generators or motors and steering compass About 13 metres

The nearest cables to the compasses are as follows:

A cable carrying 2 Amperes 6 feet from standard compass 7 feet from steering compass

A cable carrying 15 Amperes 11 feet from standard compass 12 feet from steering compass

A cable carrying Amperes 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.

ANTHONY J. MATTHEWS

..... Builder's Signature Date

Is this installation a duplicate of a previous case Yes If so, state name of vessel, m.s. "Sagat" and "Suorva".

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 materials are good and the Makers' certificates of test of the electric motors and the 5 KW. generator are attached. *Not received*

The generators above 100 KW. have been inspected by the Surveyors during construction and testing. ✓

On completion, the installation was megger tested throughout, examined under full power conditions and found satisfactory.

Noted

SKM

19.6.44

Total Capacity of Generators 335 Kilowatts

Amount of Fee Got. a/c Kr. 748:60 When applied for
Skn. a/c Kr. 187:15 16/5/44
h
Balance Expended on any Kr. 68:00 When received
Skn. a/c 19

General Remarks

THURS 29 JUN 1944

*see minute
on 26.6.44*



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