

Rpt. 13.

No. 3104.

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 9th June, 1952. When handed in at Local Office 11th June 1952. Port of M A L M Ö

Received at London Office

12 JUN 1952

No. in Survey held at Malmö Date, First Survey 17th April Last Survey 30th May, 1952.

Reg. Book.

(No. of Visits 11)

41109s on the M/T "SOYA-MARGARETA" Tons Gross 10,628 Net 7,906

Built at Malmö By whom built Kockums Mek. Verkst. AB Yard No. 343 When built 1952.

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

Installation fitted by Kockums Mek. Verkstads A.-B. When fitted 1952.

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

Plans, have they been submitted and approved yes System of Distribution Two wire insulated Voltage of Lighting 110

Heating 220 Power 220 D.C. or A.C., Lighting DC Power DC 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

if not compound wound state distance between generators - and from switchboard - Are the generators 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

Position of Generators One starboard side, one port side in Engine room.

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, 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 dead front switchboard, 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 Three pole circuit breakers with overload and reverse current trips on two poles. On third pole equalizer switch, interlocked as required by Rules.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit a fuse on each pole and a double-pole lined switch.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. yes Instruments on main switchboard 8 ammeters 6 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection. yes Earth Testing, state means provided 2 ohm-meters

Switches, Circuit Breakers and Fuses, are they as per Rule. yes, are the fuses an Approved Type. yes, make of fuses Laur. Knudsen, Copenh., are all fuses labelled. yes If circuit breakers are provided for the generators, at what overload do they operate at 10% and at what current do the reversed current protective devices operate 30 A

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule. yes

Cables, are they insulated and protected as per Rule. 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 6% are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets. yes 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 Are cables in machinery spaces, galleys, laundries, etc., lead covered. yes or run in conduit. - or of the "HR" type. - State how the cables are supported or protected L.C. and STA cables in M.R. and on Deck are clipped to surface plates or trays and under floor plates in M.R. covered by steel channel plates. L.C. cables in accommodation are clipped to surface or to wood grounds

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

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 and fitted as per Rule... are they adequately ventilated... state battery capacity in ampere hours

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

Are any 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...Cables led in gastight tubing and lamps contained in flame proof fittings and where are the controlling switches fitted...outside these spaces... Are all fittings suitably ventilated...yes

Searchlight Lamps, No. of 1 (Suez Canal), 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...none

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...none

Have certificates of test for motors under 100 BHP intended for essential sea 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... 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 an Approved Cartridge Type...yes... make of fuse Laur. Kruhsaen, Copenhagen

Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships...yes

Are the cables lead covered as per Rule...yes

E.S.D., if fitted state maker...Svensk AB Log... location of transmitter...DB coff... ER fwo... and receiver... Dito, s.s.

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				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	2	ASEA	200	230	870	350	Heavy oil eng.	Kockums M.V.A/B
Harbour	1	Clarke Chapman & Co.Ld.	75	230	326	550	Steam.	C.Chapman & Co.Ld.
EMERGENCY ROTARY TRANSFORMER	2	ESAB	25	115	218	1450	El.Motor	ESAB

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	200	4	185	870	4x232	60	Rubber	L.C. and S.T.A.
" " EQUALISER		8	185		8x232	60	Rubber	L.C. and S.T.A.
Harbour Generator	75	2	120	326	2x175	15	Rubber	L.C. and S.T.A.
EMERGENCY GENERATOR	31	1	120	150	175	35	Rubber	L.C. and S.T.A.
ROTARY TRANSFORMER: MOTOR	25	1	185	227	232	35	Rubber	L.C. and S.T.A.

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
C 1-oil separator, pumps	1	70	114	124	23	Rubber	L.C. and S.T.A.
C 2-hydrophor pumps, nozzle cool. pumps etc.	1	70	85	124	22	Rubber	L.C. and S.T.A.
C 3-workshop motors	1	50	82	98	74	Rubber	L.C. and S.T.A.
C 4-ventilators, laundrymotors	1	35	54	77	66	Rubber	L.C. and S.T.A.
C 5-galley installation	1	120	122	175	60	Rubber	L.C. and S.T.A.
C 6-E S D Radar, Gyro etc.	1	70	100	124	140	Rubber	L.C. and S.T.A.

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Fuel oil heater	1	50	78	98	19	Rubber	L.C. and S.T.A.
Lubr.oil heater	1	50	78	98	54	Rubber	L.C. and S.T.A.
Water heater	1	16	39	48	26	Rubber	L.C. and S.T.A.
Navigationlights	1	6	1	29	240	Rubber	L.C. and S.T.A.
Wireless	1	6	8	29	200	Rubber	L.C. and S.T.A.
B1-in Gyro Room-(Bla,B1b,B1c,Suez C)	1	185	147	232	140	Rubber	L.C. and S.T.A.
B 2 - Poop, p.s.	1	35	36	77	40	Rubber	L.C. and S.T.A.
B 3 - Poop, s.s.	1	35	35	77	50	Rubber	L.C. and S.T.A.
B 4 - Eng. Room	1	25	22	63	8	Rubber	L.C. and S.T.A.
B 5a and b, Eng. Room,(Sal-Log)	1	2,5	12	13	3	Rubber	L.C. and S.T.A.
From C 6							
Radar	1	10	9	38	20	Rubber	L.C. and S.T.A.
Gyrocompass	1	2,5		13	6	Rubber	L.C. and S.T.A.
E S D	1	2,5		13	160	Rubber	L.C. and S.T.A.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Lubricating oil pumps	2	46	1	150	170	202	82	Rubber	L.C. and S.T.A.
S.W. pumps	2	36	1	120	136	175	70	"	"
F.W. pumps	2	30	1	70	113	124	68	"	"
Fire pump	1	21	1	50	82	98	18	"	"
Cooling N.pumps for aux.mot	1	10	1	16	39	48	64	"	"
Turning gear	1	16	1	35	64	77	64	"	"
Traverse crane		6,5	1	10	27	38	35	"	"
Steering gear	2	24	1	50	93	98	70	"	"
From C 1									
Fuel oil separator	2	8	1	10	30	38	19	"	"
Fuel oil transfer pump	1	5	1	6	21	29	13	"	"
Bilge pump	1	8	1	10	32	38	5	"	"
From C 2									
Hydrophor pumps	2	2	1	2,5	9	13	11	"	"
Nozzle cooling pump	2	1,3	1	1,5	6	7	35	"	"
Lubr.oil separator	1	7	1	10	28	38	35	"	"
Refrigerator	1	5	1	6	22	29	38	"	"
From C 3									
Lathe	1	5	1	6	20	29	22	"	"
Drilling machine	1	1,8	1	2,5	8	13	20	"	"
Grinding machine	1	0,35	1	2,5	7	13	7	"	"
Shaping machine	1	2	1	2,5	9	13	13	"	"
Welding transformer	1	8	1	10	30	38	-	"	"

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.

KOCKUMS  
 MEKANISKA VERKSTÄDS AKTIEBOLAG  
 ELEKTRIKA AVDELNINGEN

Electrical Contractors. Date 11th June, 1952.

*J. Brånge*

COMPASSES.

Have the compasses been adjusted under working conditions.....yes.....

KOCKUMS  
 MEKANISKA VERKSTÄDS AKTIEBOLAG

Builder's Signature. Date 11th June, 1952.

*Turtboecklund*

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

Is this installation a duplicate of a previous case.....no..... If so, state name of vessel.....

Plans. Are approved plans forwarded herewith.....no..... If not, state date of approval..... 17.4.52

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

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

The electrical installation has been made under special survey in accordance with the requirements of the Rules and the approved plans. The workmanship is good, so the materials used.

It is submitted this el. installation is eligible to be accepted for classed motor tanker.

*Noted 20/11/52*

Total Capacity of Generators..... 475 ..... Kilowatts.

The amount of Fee	Mmo. . . . . Kr.	: 1680:-	When applied for,
	Skm. Kr.	420:-	
Travelling Expenses (if any)	Skm.	: 46:60	When received,
	Kr.		19.....

*A. Örn*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... TUES. 8 JUL 1952

Assigned..... *See F.E. mch. rpt.*

2m.9.46.—Transfer. (MADE AND PRINTED IN ENGLAND.)  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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