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No. 3734

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

28 JAN 1958

Received at London Office

Date of writing Report 23/1 19 58 When handed in at Local Office 27/1 1958 Port of M A L M Ö

Survey held at M A L M Ö Date, First Survey 11/11 1957 Last Survey 14/1 19 58.

(No. of Visits 16)

on the Motortanker "SOUTHERN CLIPPER" Tons Gross 13,069

By whom built Kockums Mek. Verkstads AB Yard No. 394 When built 1958

Owners Rederi AB Clipper Port belonging to Malmö

Installation fitted by Kockums Mek. Verkstads AB When fitted 1958

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

ns, have they been submitted and approved Yes System of Distribution 3-Phase Insulated Voltage of Lighting 110

Power 440 D.C. or A.C., Lighting A.C. Power A.C. If A.C. state frequency 60 c/s

ime Movers, has the governing been found as per Rule when full load is thrown on and off Yes Are turbine emergency governors fitted

Generators, are they compound wound - and level compounded under working conditions -

Is the compound winding connected to the negative or positive pole -

ave machines 100 KVA and over been inspected by the Surveyors during manufacture and testing Yes Have certificates of test for machines

der 100 KVA been supplied and the results found as per Rule Yes Position of Generators Port and Stbd. on E.R. Floor

nd on Platform Port side in E.R.

the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and

Switchboards, where are main switchboards placed On Platform Port, side in

ngine Room.

they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,

Manam and oil Yes, what insulation is used for the panels Dead front switch board. if of synthetic insulating

aterial is it an Approved Type - if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as

Is the construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear

each generator and arrangement of equaliser switches 3-pole C.B. with insulating switch o/c, R/C and U/V release.

d the switch and fuse gear (or circuit breakers) for each outgoing circuit Triple pole switches and triple pole fuses.

compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 18

imeters 6 voltmeters 1 synchronising devices. For compound machines in parallel are the ammeters and reverse current

rotection devices connected on the pole opposite to the equaliser connection - Earth Testing, state means provided

Ω-meter Preference Tripping, state if provided Yes, and tested Yes

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

ike of fuses ASEA, are all fuses labelled Yes If circuit breakers are provided for the generators, at what

erload do they operate At 10%; Set at 50%, and at what current do the reverse current protective-

vices operate < 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

der maximum load < 6% volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends None fitted.

re all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical

mage. Yes, are any cables laid under machines or floorplates Yes, if so, are they adequately protected Yes State

oe of cables (if in conduit this should also be stated) in machinery spaces Lead covered, galleys Lead covered.

d laundries. Lead covered State how the cables are supported or protected L.C. & S.T.A. cables clipped to

urface plate or tray in machinery space and on decks and covered with steel channel plates under floor

ates in machinery room. Lead covered cables clipped to surface or to wood grounds in accommodations.

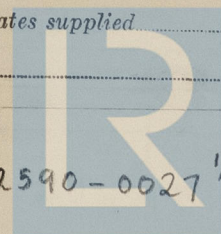
e all lead sheaths, armouring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertight

lkheads provided with deck tubes or watertight glands Yes, where unarmoured cables pass through beams, etc., are the holes

of Shctively bushed Yes Refrigerated chambers, are the cables and fittings as per Rule -

ve refrigeration fan motors been constructed under survey - and test certificates supplied

e 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. None state battery capacity in ampere hours. - Where required to do so does it comply with 1948 International Convention. -

Lighting, is fluorescent lighting fitted. Yes If so, state nominal lamp voltage. 110 and compartments where lamps are fitted in accommodations, engine room and weather decks.

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 None, whether fixed or portable. -, are they of the carbon arc or of the filament type. -

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. 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. ASEA 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 Werke, Bremen location of transmitter and receiver. In a cofferdam at forward end of E.R.

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.	
			KVA per Generator	Volts.	Amps.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	ASEA	290	450	372	360	Heavy Oil Engine	Kockums Mek. Verkstads AB
"	1	Thrive	290	450	372	1200	Steam Turbine	Jönköpings Mek. Verkstad
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	No. of	KVA	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (feet plus 10%)	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	3	290	4	95	372	✓ 420	45	Rubber	L.C. & S.T.A.
" EQUALISER									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
" GENERATOR									

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

DESCRIPTION.	No. of	Sectional Area sq. mm.	MAXIMUM CURRENT IN AMPERES	APPROX. LENGTH (feet plus 10%)	INSULATION.	PROTECTIVE COVERING.
P1 Amidship	1	10	18	✓ 27	120	Rubber L.C. & S.T.A.
P2 Engine Room casing Port side	1	25	32	✓ 44	25	" " " "
P3 Laundry	1	25	28	✓ 44	40	" " " "
P4 Steering Gear Room	1	35	36	✓ 55	55	" " " "
P4a Poop Deck	1	6	13	✓ 21	15	" " " "
P5 Engine Room Tween Deck	1	25	23	✓ 44	15	" " " "
P6 Engine Room Workshop	1	35	48	✓ 55	35	" " " "
P7 Engine Room Floor Forward P.S.	1	50	52	✓ 69	15	" " " "
P8 Engine Room Floor Aft P.S.	1	35	50	✓ 55	18	" " " "

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet plus 10%)	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area sq. mm.	In the Circuit.	Rule.			
L1 Chart Room Amidship	1	10	15	✓ 27	18	Rubber	Leadcov. & Armoured
L2 Boat Deck	1	25	30	✓ 44	15	"	"
L3 Bridge	1	35	42	✓ 55	10	"	"
L4 Boat Deck Aft	1	25	26	✓ 44	45	"	"
L5 Poop	1	10	22	✓ 27	30	"	"
L6 Main Starboard side	1	35	40	✓ 55	40	"	"
L7 " Port side	1	35	44	✓ 55	30	"	"
L8 Forecastle	1	10	11	✓ 27	75	"	"
L9 Engine Room	1	35	39	✓ 55	5	"	"
Navigation light	1	1.5	0.4	✓ 7	135	"	"
Windlass transformer	1	2.5	7	✓ 13	6	"	"
Radar	1	2.5	3	✓ 13	6	"	"
Gyro Compass	1	1.5	4	✓ 7	18	"	"
Suez light	1	10	14	✓ 27	95	"	"
E.S.D.	1	1.5	4	✓ 7	2	"	"
Transformers.							
No. 1 lighting 440/110 Primary	1	50	56	✓ 69	6	"	"
Secondary	2	70	226	✓ 250	2	"	"
No. 2 " 440/110 Primary	1	50	56	✓ 69	8	"	"
Secondary	2	70	226	✓ 250	2	"	"
No. 1 Amidship lighting 440/110 Primary	1	10	19	✓ 24	4	"	"
Secondary	1	70	79	✓ 87	7	"	"
No. 2 Amidship lighting 440/110 Primary	1	10	19	✓ 24	5	"	"
Secondary	1	70	79	✓ 87	6	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	Sectional Area sq. mm.	MAXIMUM CURRENT IN AMPERES	APPROX. LENGTH (feet plus 10%)	INSULATION.	PROTECTIVE COVERING.
Steering gear	2	20	1	16	29	✓ 33	55 Rubber L.C. & Armoured
Lubricating oil pump	2	32	1	25	39	✓ 44	50 " "
F.W. cylinder cooling pump	2	32	1	25	39	✓ 44	60 " "
F.W. piston " "	2	32	1	25	39	✓ 44	60 " "
S.W. cooling pump	2	50	1	50	62	✓ 69	50 " "
Manoeuvring compressor	2	70	1	95	101	✓ 105	15 " "
Fire and sanitary pump	1	30	1	25	36	✓ 44	20 " "
Bilge pump	1	9	1	2.5	11.8	✓ 13	26 " "
Aux. eng. F.W. cooling pump	1	6	1	2.5	7.2	✓ 13	15 " "
" " S.W. " "	1	6	1	2.5	7.2	✓ 13	15 " "
O.F. transfer pump	1	17	1	6	20	✓ 21	25 " "
Condenser circ. pump	1	42	2	35	51	✓ 55	20 " "
E.R. fans	4	5	1	2.5	7.7	✓ 13	40 " "
Turning gear	1	34	2	35	52	✓ 55	50 " "
Air condition cooling pump	1	11	1	6	15	✓ 21	15 " "
Vacuum pump for condenser	1	8	1	2.5	11	✓ 13	12 " "
Condensation water pump	1	3.5	1	1.5	4.7	✓ 7	12 " "
Cargo oil pump	1	360	4	95	395	✓ 420	28 " "
Heavy oil purifiers	2	15	1	6	20	✓ 21	22 " "
Cooling compressors	2	20	1	10	24	✓ 27	12 " "

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.

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
ELEKTRISKA AVDELNINGEN

Electrical Contractors.

24. JAN. 1958
Date

Åke Frimberg

COMPASSES.

Have the compasses been adjusted under working conditions. Yes

KOCKUMS
MEKANISKA VERKSTÄDS AKTIEBOLAG

G. Lundqvist

Builder's Signature.

Date

Åke Frimberg

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. Gothenburg 20/12 1957.

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.)

The above described electrical equipment has been fitted in the vessel in accordance with the Rule,
approved plans and has been tested with satisfactory results.

The workmanship is good.

Lloyd's and Makers' certificates in respect of generators and motors are attached.

Total Capacity of Generators. 870 KVA. Kilowatts.

The amount of Fee .MMO. ... £Kr. 2.410: When applied for,
" " " " SKM. Kr. 600: 27/1 19.58.

Travelling Expenses (if any) £Kr. : 137: When received,
(SKM). 19.

Edvardsson
Surveyor to Lloyd's Register of Shipping.

TUESDAY - 4 MAR 1958

Committee's Minute

Assigned. See Rpt. 1.



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