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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

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

(No. of Visits 16)

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

and built at Malmö 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

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

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

Time 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 --, and level compounded under working conditions --

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

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

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

and on Platform Port side in E.R.

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 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,

Man and oil Yes, what insulation is used for the panels Dead front switch board, 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 3-pole C.B. with insulating switch o/c, R/C and U/V release.

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

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

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

protection 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

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

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

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

devices 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

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

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 Lead covered, galleys Lead covered.

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

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

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

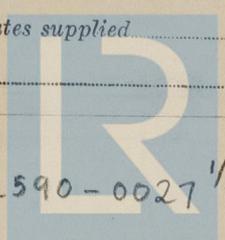
Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertight

heads 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 --

Are refrigeration fan motors been constructed under survey -- 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 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.	Ampères.	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 (lead plus repairs, feet).	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	KVA	No. in Parallel per Pole.	Sectional Area sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus repairs, feet).	INSULATION.	PROTECTIVE COVERING.
P1 Amidship	1	10	1	10	18	27	120	Rubber L.C. & S.T.A.
P2 Engine Room casing Port side	1	25	1	25	32	44	25	" " " "
P3 Laundry	1	25	1	25	28	44	40	" " " "
P4 Steering Gear Room	1	35	1	35	36	55	55	" " " "
P4a Poop Deck	1	6	1	6	13	21	15	" " " "
P5 Engine Room Tween Deck	1	25	1	25	23	44	15	" " " "
P6 Engine Room Workshop	1	35	1	35	48	55	35	" " " "
P7 Engine Room Floor Forward P.S.	1	50	1	50	52	69	15	" " " "
P8 Engine Room Floor Aft P.S.	1	35	1	35	50	55	18	" " " "

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus repairs, feet).	INSULATION.	PROTECTIVE COVERING.
			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.	No. in Parallel per Pole.	Sectional Area sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus repairs, feet).	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 VERKSTADS AKTIEBOLAG
ELEKTRISKA AVDELNINGEN

Electrical Contractors.

24. JAN. 1958
Date

Åke Frisberg

COMPASSES.

Have the compasses been adjusted under working conditions. Yes

KOCKUMS
MEKANISKA VERKSTADS AKTIEBOLAG

G. Lundqvist

Builder's Signature.

Date

G. Lundqvist

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

(The Surveyors are requested not to write on or below the space for Committee Minutes.)

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.

When received,

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

Stenbjörnsson
Surveyor to Lloyd's Register of Shipping.

TUESDAY - 4 MAR 1958

Committee's Minute

Assigned See Rpt. 1.

5m.6.50 - Transfer. (MADE AND PRINTED IN ENGLAND)
31.1.58
OK



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