

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

17 DEC 1953

Date of writing Report 30-11-1953 When handed in at Local Office 10-12-1953 Port of ANTWERP

No. in Survey held at ANTWERP Date, First Survey 11-3-53 Last Survey 5-10-1953 (No. of Visits 9)

18989 on the S/T "MARITIME TRADER" Tons Gross 7323.3 Net 7623.3

Built at Hoboken By whom built A. J. M. Cokerill Yard No. 759 When built 1952

Owners Maritime Transportation Co. P. A. Port belonging to Monrovia

Installation fitted by Electro Nucleaire Industrielle When fitted 1953

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

Plans, have they been submitted and approved System of Distribution Twin wire Voltage of Lighting 110

Heating 110 Power 220 D.C. or A.C., Lighting Power If A.C. state frequency

Prime Movers, has the governing been found as per Rule when full load is thrown on and off 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 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 Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule Position of Generators Two turbo generators on platform starboard side of main engine room and one Diesel motor generator on floor plate starboard side of main engine room

is the ventilation in way of generators satisfactory are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil Switchboards, where are main switchboards placed on platform starboard side of main 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 what insulation is used for the panels lead paint type "Resam", 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 Description of Main Switchgear for each generator and arrangement of equaliser switches Double pole circuit breakers with linked equaliser switches

and the switch and fuse gear (or circuit breakers) for each outgoing circuit double pole circuit breakers or double pole linked switches with fuses on each pole

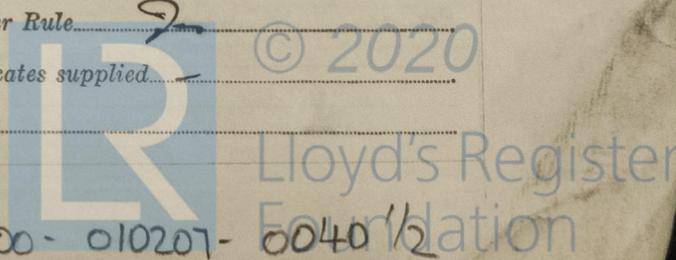
Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Instruments on main switchboard five ammeters five voltmeters two Ohm meter synchronising devices For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection Earth Testing, state means provided two Ohm meter Preference Tripping, state if provided no, and tested

Switches, Circuit Breakers and Fuses, are they as per Rule are the fuses an Approved Type make of fuses Celbes, are all fuses labelled If circuit breakers are provided for the generators, at what overload do they operate 50% - 1 min, and at what current do the reverse current protective devices operate 10% of full load Cables, are they insulated and protected as per Rule 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 7 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 are any cables laid under machines or floorplates, if so, are they adequately protected State type of cables (if in conduit this should also be stated) in machinery spaces V.I.R. - LCxA / V.C. - LCxA alleys V.I.R. - LCxA and laundries V.I.R. - LCxA State how the cables are supported or protected cables clipped to bulkheads or to galvanised perforated steel trays all cables on fore and after gangways are lead alloy sheathed and armoured

Are all lead sheaths, armouring and conduits effectually bonded and earthed Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands, where unarmoured cables pass through beams, etc., are the holes effectually bushed Refrigerated chambers, are the cables and fittings as per Rule

Have refrigeration fan motors been constructed under survey and test certificates supplied Are the motors accessible for maintenance at all times



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule 2 Emergency Supply, state position none

Navigation Lamps, are they separately wired 2 controlled by separate double pole switches and fuses 2 Are the switches and fuses in a position accessible only to the officers on watch 2 is an automatic indicator fitted 2 Is an alternative supply provided 2

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule none state battery capacity in ampere hours none Where required to do so does it comply with 1948 International Convention none

Lighting, is fluorescent lighting fitted no If so, state nominal lamp voltage none and compartments where lamps are fitted none

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof 2

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

Heating and Cooking, is the general construction as per Rule 2, are the frames effectually earthed 2, are heaters in the accommodation of the convection type 2 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 2

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 2 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 2

Lightning Conductors, where required are they fitted as per Rule none

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 2, are all fuses of an Approved Cartridge Type 2, make of fuse Celanese Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships 2 Are all cables lead covered as per Rule 2

E.S.D., if fitted state make Raytheon Manuf. Co. Location of transmitter and receiver Cofferdam 4th

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations 2

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory 2

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT			Revs. per Min.	TYPE.	PRIME MOVER.	MAKER.
			Kw. per Generator.	Volts.	Ampères.				
MAIN	two	Siemens - Schuckert make A.C.	300	220	132.4	1600	Steam Turbine	Siemens - Schuckert make	
Aux.	one	Siemens & Schuckert make A.C.	150	220	65.5	650	Wick motor	Anglo Belgian Co.	
EMERGENCY ROTARY TRANSFORMER	two	Samson Scott	50	220/110	4.55	1440	Blotch Motor	Samson Scott	

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return $\frac{1}{2}$ in)	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	2	300	7	19/083	133.4	141.4	8	Cambic	LC.A.
" EQUALISER	7		7	19/083		141.4		"	"
Aux. Generator	1	150	4	19/083	68.2	80.8	26	"	"
" equaliser	4		4	19/083		80.8		"	"
EMERGENCY GENERATOR	2	50	2	19/083	28.5	40.4	34	"	"
ROTARY TRANSFORMER: MOTOR	2		2	19/083	4.55	60.6	24	"	"
" GENERATOR	2	50	2	19/083	4.55	60.6	24	"	"
" equaliser	2		2	19/083		40.4		"	"

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

DESCRIPTION.	No. of	Kw.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return $\frac{1}{2}$ in)	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	In the Circuit.	Rule.		
PE15/PA9/PEN11/PEN11/PV21 to dist. a	1		7	7/064	58	80V 60	Cambic LC.A.
dist. fuse boards: TIC/T9/T12/T12/T21							
PM13/PM20/PM20/PM20 to dist. board & steering gear	1		19/064	114.5	143V 50	"	"
PM19/PA01/PV25 to dist. board TIC/T9/T12/T21	1		19/083	190	202V 55	"	"
5th. G.P. shore connection	4		19/083	700	80.8V 64	"	"
PA4/PA4 to section board T4	2		19/083	25.5	40.4V 180	"	"
PEN6 to dist. fuse board T6	1		7/052	20	37V 20	V.L.R.	"
PEN14/PEN14/PEN14/PEN11 to dist. boards T4/T12/T12/T21	1		7/044	26	31V 30	"	"
PV20 to dist. fuse board T20	1		19/052	88.5	110V 10	Cambic	"
PA01 to searchlight	1		19/064	27	83V 260	V.L.R.	"

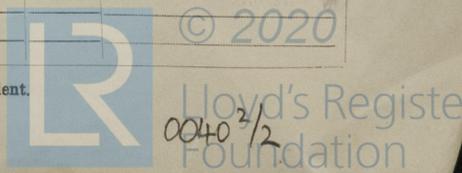
DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.).

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return $\frac{1}{2}$ in)	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.			
<b>DISTRIBUTION CABLES FROM SECTION BOARDS TO DISTRIBUTION FUSE BOARDS:</b>							
4N1/2N1 to dist. fuse board T1	1	3/036	3	10V	20	V.L.R.	LC.A.
4N2 to dist. fuse board T2	1	19/044	75	92V	25	Cambic	"
4EN3 to dist. fuse board T3	1	19/044	45.5	53V	7	V.L.R.	"
12EN7/12EN8/4EN10 to dist. board T7, 8, 10	1	7/064	22	80V	62	Cambic	"
<b>Navigation Lights</b>							
Navigation lights	1	3/029	0.54	4V		V.L.R.	LC.A.
Lighting from dist. fuse boards to light points & leading	1	3/029	3	4V		"	LC.A. & LC.
	1	3/036	5	7V		"	"
	1	7/029	6	11V		"	"
	1	7/036	5	17V		"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return $\frac{1}{2}$ in)	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	In the Circuit.	Rule.		
PM01 Comb. circ. & ext. pump	1	17	1	19/044	66	92V 60	Cambic LC. & A.
PM03/PM04 lubr. oil pump	2	19	1	19/052	73	110V 50	"
PM05 Com. pump	1	30	1	19/064	114	143V 32	"
PM06/PM07 extraction pump	2	20	1	19/052	77	110V 34	"
PM08 air comp.	1	25	1	19/064	95	143V 60	"
PM09/PM10 Fresh draught fan	2	24	1	19/052	91	110V 74	"
PM011/PM012 Main water pumps	2	20	1	19/064	114	143V 35	"
PM14 Main circ. pump	1	90	2	19/083	333	404V 56	"
PM19 Gen. serv. pump	1	85	2	19/083	312	404V 52	"
PM01/PM02 Motor Gen.	2	75	2	19/083	280	404V 34	"

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.

Electrical Contractors. Date 2-12-53

*J. De la...  
 ELECTRA NAVALE  
 INDUSTRIELLE*

COMPASSES.

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

SOCIÉTÉ ANONYME JOHN COCKERILL  
 Division du Câblage Naval  
 HOULON - Bruxelles

Builder's Signature. Date 2-12-53

*L. Barbier*  
 Secrétaire  
 L. BARBIER

Have the foregoing descriptions and schedules been verified and found correct... 2

Is this installation a duplicate of a previous case... Yes If so, state name of vessel MARITIME LEADER

Plans. Are approved plans forwarded herewith... Yes If not, state date of approval -

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 electrical equipment of this vessel has been constructed and installed under Special Survey of the Society's Surveyors in accordance with the Rules, the approved plans and the Secretary's letters. The materials and workmanship are good. Insulation and other tests have been carried out with satisfactory results in accordance with the Rule requirements. The electrical installation of this vessel is eligible, in my opinion, to be incorporated in the class assigned to the machinery.*

*Noted J.S.  
 11/1/54*

Total Capacity of Generators 750V Kilowatts.

The amount of Fee... fr. 28250.- When applied for, 25-11-53

Travelling Expenses (if any) fr. 1165.- When received, 5-12-53

*J. Talbot*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRIDAY 15 JAN 1954

Assigned See Rpt. 4a.

*X-80m  
 1.1.54*

3m.12.51. Transfer (MAD... PRINTED IN ENGLAND.)  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)