

27 FEB 1959

No. 34339

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 7-1-1959. When handed in at Local Office 15-1-1959 Port of Antwerp.

No. in Survey held at Reg. Book. Date, First Survey 5-8-58 Last Survey 7-12-1958 (No. of Visits 14)

21735 on the m.v. "MARLY I" Tons Gross 10,350 Net 6,263

Built at Tamise By whom built Jos Boel & Sons S.A. Yard No. 1360 When built 1958.

Owners Cokeries du Marly Port belonging to Antwerp

Installation fitted by S.A. Electro Navale et Industrielle When fitted 1958.

Is vessel equipped for carrying Petroleum in bulk no 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 three phase three wire Voltage of Lighting 110

Heating - Power 440 D.C. or A.C., Lighting 110 Power 440 If A.C. state frequency 60

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 Siemens constant voltage alternators, and level compounded under working conditions. Voltage-load characteristics satisfactory.

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

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing yes Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule yes Position of Generators Starboard side main 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 Platform Starboard side main engine room in fore and aft direction

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 type (Resarm), if of synthetic insulating material is it an Approved Type yes, 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 Three pole SACE circuit breakers Z<sub>2</sub> 400 One three pole SACE circuit breakers Z<sub>2</sub>-250

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

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 7 ammeters 6 voltmeters 2 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

earth indicating lamps 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 Cehess, are all fuses labelled yes If circuit breakers are provided for the generators, at what overload do they operate 50% 20 sec., and at what power current do the reverse power protective devices operate 8% of full load

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 4 volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends yes

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 none, if so, are they adequately protected - State

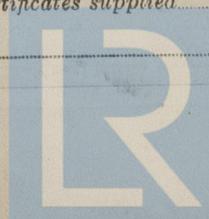
type of cables (if in conduit this should also be stated) in machinery spaces cambric LC&A, V.R.I. LC&A, galleys HR. M.I.C. and laundries - State how the cables are supported or protected. Clipped to steel bulkheads or to

steel cable trays. Protected against mechanical damage where necessary.

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 and test certificates supplied

Have refrigeration fan motors been constructed under survey -

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 none

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 yes Where required to do so does it comply with 1948 International Convention no ampere hours 180 Amp/hr. state battery capacity in

Lighting, is fluorescent lighting fitted no If so, state nominal lamp voltage and compartments where lamps are fitted

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 one, 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

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 no, are all fuses of an Approved Cartridge Type no, make of fuse no Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships no Are all cables lead covered as per Rule no

E.S.D., if fitted state maker Marconi Seagraph location of transmitter and receiver ER and Chartroom

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			TYPE.	PRIME MOVER.	MAKER.
			Kw. per Generator	Volts.	Amps.			
MAIN	3	Siemens Schuckert Werke A.G.	160	450	265	600	Diesel	Cockerill-Ougrée S.A.
Harbour ROTARY TRANSFORMER	1	Siemens Schuckert Werke A.G.	40	450	65	1200	Diesel	Deutz.

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return lead) in ft.	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	3	160	2	19/.083	265	282	29	cambric	LC & A.
" EQUALISE									
Harbour ROTARY TRANSFORMER: MOTOR GENERATOR	1	40	1	19/.052	65	77	15	cambric	LC & A.

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.). 440 Volt

DESCRIPTION.	No. of	Kw.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return lead) in ft.	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.	
T13/PA6 To sect. brds. T 13 & T 6	1		1	19/.064	90	100	52 Cambric LC & A.
P.F.01 To refr. instal.	1		1	19/.044	35	37	50 V.R.I. LC & A.
PM.I2/PV.I1 To sect. brds. T.12 & T.11	1		1	7/.052	25	26	30 V.R.I. LC.&A.
Sh.G.P. to shore connection	1		1	19/.064	65	100	50 Cambric LC.& A.
PN2/PM15 to sect. brd. T2 & T15	1		1	7/.029	15	15	36 V.R.I. LC.& A.
PN.O1 to Gyro-Pilot	1		1	3/.036	10	10	48 V.R.I. LC.& A.
P.MP.9 to sect. brd. T9	1		1	19/.083	140	141	70 Cambric LC.& A.
P.N.O3 to Search Light	1		1	7/.036	10	24	130 V.R.I. LC.& A.
P.M.I4 to Sect. brd. T.14	1		1	19/.064	50	58	30 V.R.I. LC.& A.
P.M.I6 to Sect. brd. T.16	1		1	7/.029	15	15	27 V.R.I. LC.& A.
Feeder to transformers	1		1	19/.064	100	83	12 V.R.I. HR.

MAIN DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.). 110 Volt.

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return lead).	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
P.AA6 To distr. fuse brd. T6	1	7/.044	20	22	50	V.R.I.	HR.
P.E.I0 " " " " T10	1	7/.064	30	32	47	V.R.I.	HR.
P.E.4 " " " " T4	1	19/.044	35	37	50	VR.I.	HR.
P.E.11 " " " " T11	1	19/.083	50	83	27	V.R.I.	HR.
P.N.1 " " " " T1	1	3/.036	6	10	37	V.R.I.	HR.
PG.3 " " " " T3	1	19/.083	110	141	35	Cambric	LC.&A.
PE5 " " " " T5	1	19/.044	35	37	30	V.R.I.	HR.
P.NN2 " " " " T2	1	7/.064	30	32	32	V.R.I.	HR.
P.NO2 to wireless	1	19/.083	50	118	50	V.R.I.	HR.
P.E.7 to distr. fuse brd. T7	2	7/.064	25	32	125	V.R.I.	HR.
P.E.15 " " " " T15	1	7/.029	10	15	30	V.R.I.	HR.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return lead).	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.			
P.M.P.01/02 steering gear	2	15	1	7/.052	25	26	57	V.R.I.	LC & A
17M01/02 Air compr.	2	31,5	1	7/.064	46	56	20	Cambric	" "
17M03/04 Cooling water pumps.	2	45	1	19/.044	57	64	27	Cambric	" "
17M05 Cooling water pump.	1	55	1	19/.052	67	77	24	Cambric	" "
17M06/07/08 Fuel valve cooling pumps.	3	3	1	3/.036	4,3	10	22	V.R.I.	" "
17 M09 Bilge pump	1	3	1	3/.036	4,3	10	30	V.R.I.	" "
17M010/011 Ballast pumps.	2	75	1	19/.064	91	100	28	Cambric	" "
17M012 General service	1	14	1	7/.044	18	22	30	V.R.I.	" "
17M015 Fuel oil transfer pump	1	18,5	1	7/.052	26	26	36	V.R.I.	" "
17M016 Fuel oil transfer pump	1	8,6	1	7/.029	12	15	38	V.R.I.	" "
17M017/018 Lubr. oil pumps.	2	27	1	19/.044	35	37	47	V.R.I.	" "

NOTE.—Use Rpt. 43 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.

*[Signature]*  
L'ELECTRO NAVALE & INDUSTRIELLE  
63, Rue de l'Empereur, 63 - AN. LRS

Electrical Contractors.

Date 14-7-59

COMPASSES.

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

N.V. JOS BOEL & ZONEN

Builder's Signature.

Date 16-1-59

*[Signature: F. d. Van Dyck]*

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 24-6-58/1-8-58/22-7-58/15-10-58.

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 installed under the 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 required by the Rules have been carried out with satisfactory results.

The electrical equipment of this vessel is eligible in my opinion, to be incorporated in the class assigned to the machinery.

Total Capacity of Generators 520 Kilowatts.

The amount of Fee ... £s. 20.900.-

When applied for, 22-1-1959

Travelling Expenses (if any) £s. 1625.-

When received, 19

*[Signature]*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRIDAY 10 APR 1959

Assigned

See Rpt. 1.

MADE AND PRINTED IN ENGLAND  
(The Surveyors are requested not to write on or below the space for Committee Minutes.)



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