

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 5-MAY 1956

Date of writing Report 11th Apr. 1956 When handed in at Local Office 13th Apr. 1956 Port of Bremen

No. in Survey held at Bremen-Hemelingen Date, First Survey 10th Jan., Last Survey 10.4. 1956  
(No. of Visits 16)

Reg. Book. 35542 on the M.V. "MILIANA" Tons Gross 1133.07 Net 439.30

Built at Bremen-Hemelingen By whom built Rolandwerft GmbH. Yard No. 857 When built 1956

Owners Cie. Nouvelle De Nav. Busck S.A. Port belonging to Marseilles/France

Installation fitted by Gebr. Meyn, Elmshorn/Hamburg When fitted 1956

Is vessel equipped for carrying Petroleum in bulk no Is vessel equipped with D.F. yes E.S.D. yes Gy.C. - Sub.Sig. - Radar -

Plans, have they been submitted and approved yes System of Distribution 2 wire insulated Voltage of Lighting 230

Heating 230 Power 230 D.C. or A.C., Lighting D.C. Power D.C. 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 - Main: Yes. Shaft: Shunt wound. and level compounded under working conditions yes

Generators, are they compound wound - Are the generators arranged to run in parallel yes 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 yes Position of Generators Main gen.: Port and Stbd. side

E.R. Shaft gen.: Lower flat ER aft. Harbour gen.: In steering gear flat.

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 Main switchboard: In Engine Room near generators. Harbour generator switchboard: In steering gear flat.

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 Deadfront Type, 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 Main gen.: T.P. linked CB with O/C trips and time delays on 2 poles, R.C. trip, 3rd pole for equalizer. Shaft gen.: D.P. linked CB with 2 O/C trips and time delays and R.C. trip. Harbour gen.: D.P. linked switch and 2 fuses.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Double pole switch and 2 fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 3

ammeters 3 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection yes Earth Testing, state means provided

Ohmmeter Preference Tripping, state if provided no, and tested -

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

make of fuses Voigt & Haeffner, are all fuses labelled yes If circuit breakers are provided for the generators, at what overload do they operate 490 amps. (120% FL generator), and at what current do the reverse current protective devices operate 40 amps.

if otherwise than as per Rule are they of an Approved Type MK/MKO/FMK, state maximum fall of pressure between bus bars and any point under maximum load less than 6% 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 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 VRILC & metal braided, galleys VRILC & VRILC & metal braided and laundries VRILC & VRILC & metal braided State how the cables are supported or protected Clipped in metal troughs fitted with covers or clipped to metal trays/supports, structure or wood grounds and protected by pipes or plates 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 -

Have 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 220 volt harbour generator in steering gear flat with automatic cut in and cut out arrangement. 24 volt lighting generator in steering gear flat.

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 - state battery capacity in ampere hours - Where required to do so does it comply with 1948 International Convention -

Lighting, is fluorescent lighting fitted no If so, state nominal lamp voltage 110 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 - 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 -

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

E.S.D., if fitted state maker SCAM Brevete SGO location of transmitter and receiver between frames 85-86

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.	
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	Hansa Motoren Hamburg	90	230	390	1150	Diesel	M.V. Mannheim
	1	Hansa Motoren Hamburg	40	230	174	1800	Shaft driven	Fitted with automatic voltage regulator
Harbour	1	Hans Still AG., Hamburg	15	230	65.5	1250	Diesel	M.W. Mannheim
ROTARY TRANSFORMER								

#### GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus cable) in metres.	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area of each conductor in sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	2	90	2	150	390	2x205	30	Rubber	LC & Metal braid.
" EQUALISER			1	150	-	205	15	"	"
Shaft Generator	1	40	1	150	174	205	40	"	"
Harbour	1	15	1	50	65.5	99	10	Rubber	LC & metal braid.
ROTARY TRANSFORMER: MOTOR									
" GENERATOR									

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

DESCRIPTION.	No. of	Kw.	No. in Parallel per Pole.	Sectional Area of each conductor in sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus cable) in metres.	INSULATION.	PROTECTIVE COVERING.
Aux. swbd. 1 in steering flat (Thro' Auto Cont.)	1	50	1	50	80	99	80	Rubber LC & metal braid.
Aux. swbd. 2 in steering flat	1	25	1	25	60	63	80	"
Supply to m. swbd.	1	50	1	50	80	99	80	"
Fwd. winches & windlass	1	150	1	150	82	205	130	"
Mids. winches & power	1	185	1	185	194	235	90	"
Aft winches	1	150	1	150	126	205	35	"

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

5- MAY 1956

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area of each conductor in sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus cable) in metres.	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
Aft power	1	10	35	38	50	Rubber	LC & metal braid.
Navigation ind. board	1	1.5	2	9.5	120	"	"
Ltg. & power bridge DK	2	10	35	38	130	"	"
Fwd. ltg.	2	6	20	29	160	"	"
Mids. ltg. & power	2	10	35	38	130	"	"
Aft accom. ltg.	2	6	25	29	40	"	"
aft accom. ltg.	2	6	25	29	30	"	"
Workshop	1	4	20	22.5	25	"	"
Cargo hold vent. fans	1	10	35	38	40	"	"
ESD	1	1.5	3	9.5	10	"	"
Wireless	1	6	20	29	130	"	"
24 volt lighting	1	6	20	29	10	"	"
L.O. heaters 6KW (20FF)	1	10	28	38	40	"	"
O.F. heaters 12KWs.	1	25	55	63	40	"	"

#### MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	KW/PS		KMP.														
Steering gear	2	4	1	4	17.2	22.5	10	Rubber	LC & metal braid.									
L.O. pump	2	15	1	35	59	78	30	"	"									
Air compressor	1	15	1	25	59	63	30	"	"									
Aux. boiler fan	1	-	1	1.5	0.7	9.5	30	"	"									
Domestic pumps	2	0.59	1	1.5	3.7	9.5	10	"	"									
Dom. 'fridge compressor	1	2.2	1	2.5	12.8	15.5	6	"	"									
L.O. separator	2	0.75	1	1.5	3.55	9.5	40	"	"									
C.W. pump (reserve)	1	6.5	1	10	25.5	38	30	"	"									
E.R. fans	4	0.4	1	1.5	3	9.5	20	"	"									
Capstan	1	11	1	25	59.5	1hr. 64	80	"	"									
Circulating pump	1	7.1	1	16	38.5	49	30	"	"									
O.F. transfer pump	1	0.85	1	1.5	5.2	9.5	20	"	"									
L.O. reserve pump	1	5.9	1	10	36.5	38	25.5	"	"									
O.F. separator	1	1.5	1	1.5	6.6	9.5	40	"	"									
Bilge pump	1	8	1	10	31	38	15	"	"									
Windlass	1	15.5	1	50	82	1hr. 105	10	"	"									
Winches	2	11.8	1	35	64	1/2hr. 85	20	"	"									
Winches	4	18.4	1	50	96.5	1/2hr. 120	18	"	"									

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.

*G. H. Meyn*

Electrical Contractors.

Date 23. April 1956

COMPASSES.

Have the compasses been adjusted under working conditions

YES

*Rolandwerft G.m.b.H.*

Bremen-Hemelingen

*it*

Builder's Signature.

Date 30.4.56

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. 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 installed on board under Special Survey in accordance with or equivalent to the approved plans and Secretary's letters, seen under working conditions and all found to be satisfactory.

The material and workmanship are good.

The equipment as now fitted is suitable in my opinion for a class vessel.

Total Capacity of Generators 235 Kilowatts.

The amount of Fee ... £96 : 11 : 3 When applied for,

A/c rendered from  
London 25/8/56

When received,

Travelling Expenses (if any) £ 4 : 0 : 0 19

*W. Morris*  
Surveyor to Lloyd's Register of Shipping

TUESDAY 10 JUL 1956

Committee's Minute

Assigned

*Su Rpt. 4 C.*