

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

25 MAR 1950

Received at London Office.

Date of writing Report 24 FEBRUARY 1950 When handed in at Local Office 30 MARCH 1950 Port of NEWCASTLE-ON-TYNE

No. in Survey held at BLTH. Date, First Survey 19/4/49 Last Survey 21/3/50 19
Reg. Book. (No. of Visits 21)

49 421 on the M.V. "NELLY MÆRSK" Tons { Gross 8223.08
Net 4805.36

Built at BLTH. By whom built BLTH D.D. & S.B. Co. LTD Yard No. 342 When built 1949/50

Owners A.P. MÖLLER Port belonging to FREDERICIA.

Installation fitted by BLTH D.D. & S.B. Co. LTD. When fitted 1949/50

Is vessel equipped for carrying Petroleum in bulk YES Is vessel equipped with D.F. YES E.S.D. YES Gy.C. YES RADAR YES

Plans, have they been submitted and approved. Yes System of Distribution Two Wires Voltage of Lighting 110

Heating - Power 110 D.C. or A.C., Lighting DC Power DC 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 - Generators, are they compound wound Yes, and level compounded under working conditions Yes, if not compound wound state distance between generators - and from switchboard - Are the generators arranged to run in parallel No, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole Negative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing - Have certificates of test for machines under 100 kw. been supplied Yes and the results found as per Rule Yes

Position of Generators In Engine Room 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 Generators

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 Simdamps, 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 100 Ampere Triple Pole Circuit Breaker with 2 Overload trips.

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

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 4 ammeters 4 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection - Earth Testing, state means provided Earth lamps

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes, make of fuses Siemens Z, are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate Full load, and at what current do the reversed current protective devices operate 15% of F.L.

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule Yes, if otherwise than as per Rule are they of an Approved Type -

Cables, are they insulated and protected as per Rule Yes, are the ends of all cables having a sectional state maximum fall of pressure between bus bars and any point under maximum load <6 Nuts, are all paper insulated and varnished cambric insulated area of 0.01 square inch and above provided with soldering sockets Yes 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 Yes, if so, are they adequately protected Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit - or of the "HR" type - State how the cables are supported or protected Main Cables - Lead covered armoured and braided clipped to steel tray Accommodation cables - Lead covered clipped to wood grounds.

Are all lead sheaths, armoured 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 effectually bushed Yes Refrigerated chambers, are the cables and fittings as per Rule -

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position Aux. Generator situated in steering gear compartment.

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 and fitted as per Rule — are they adequately ventilated —

state battery capacity in ampere hours —

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

Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present Yes if so, how are they protected "Wigan" flameproof fittings

and where are the controlling switches fitted Officers accommodation alleyway Are all fittings suitably ventilated Yes

Searchlight Lamps, No. of One, whether fixed or portable Portable, are they of the carbon arc or of the filament type Wiring only

Heating and Cooking, is the general construction as per Rule —, are the frames effectually earthed —, 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 — 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 —

Control Gear and Resistances, are they constructed and fitted as per Rule Yes Lightning Conductors, where required are they fitted as per Rule Yes Ships carrying Oil having a Flash Point 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 Siemens "Z" Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships Yes Are the cables lead covered as per Rule Yes E.S.D., if fitted slate maker Henry Hughes location of transmitter E.R. Double Bottom and receiver Lowland E.R. Cofferdam

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.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	Mather & Platt	45	110	409	625	Diesel	"BUKH"
	1	Lawrence Scott	15	110	136	500	Steam	Readel
	1	KOBENHAVNS ELECT. FABRIK.	10	110	91	1200	Diesel	"BUKH"
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	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	45	1	61-093	409	492	70	V.C.	L.C.A.B.
" " EQUALISER	15	1	37-072	136	152	96	V.I.R.	L.C.A.B.
" "	10	1	19-083	91	118	45	V.I.R.	L.C.A.B.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER MOTOR								
" " GENERATOR								

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Shore Connection Box	1	37-103	200	240	132	V.I.R.	L.C.A.B.
Swing Canal Projector (Wiring only)	1	19-083	45	118	90	V.I.R.	L.C.A.B.
Emergency Switchboards	1	37-103	253.8	240	120	V.I.R.	L.C.A.B.
Main Station Aux. and Emergency Switchboards	1	19-083	91.0	118	180	V.I.R.	L.C.A.B.
Midship Switchboard	1	37-072	97.8	152	400	V.I.R.	L.C.A.B.
Galley Section board	1	7-044	21.5	31	138	V.I.R.	L.C.A.B.
Midship Accommodation Lighting Section board	1	19-064	72.9	83	18	V.I.R.	L.C.A.B.
Ventilation Section board	1	19-064	69	83	120	V.I.R.	L.C.A.B.
Engineers Workshop Section board	1	19-064	60.5	83	120	V.I.R.	L.C.A.B.
Rftig. Control Panel	1	19-064	71.9	83	150	V.I.R.	L.C.A.B.

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

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 feet).	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
Emergency supply to Wireless	1	7-052	30	37	78	V.I.R.	L.C.A.B.
Wharfedale lighting	1	7-052	25.2	37	120	V.I.R.	L.C.
Wharfedale lighting	1	7-029	6.8	15	120	V.I.R.	L.C.
Wharfedale lighting	1	7-044	7.8	31	390	V.I.R.	L.C.A.B.
Bridge Deck lighting	1	7-036	20.2	24	42	V.I.R.	L.C.
Upper Bridge Deck lighting	1	7-036	14.6	24	48	V.I.R.	L.C.
Wireless supply	1	19-083	30	118	498	V.I.R.	L.C.
Midship Accommodation lighting	1	7-036	18.2	24	84	V.I.R.	L.C.
" " "	1	7-044	14.1	31	162	V.I.R.	L.C.
" " "	1	7-036	19.9	24	60	V.I.R.	L.C.
" " "	1	7-044	20.7	31	180	V.I.R.	L.C.
Engine and Boiler Room lighting	1	7-052	31.6	37	84	V.I.R.	L.C.A.B.
Navigation Lighting	1	3-036	1.8	10	630	V.I.R.	L.C.A.B.
Gyro Compass supply	1	19-052	30	64	600	V.I.R.	L.C.A.B.
Added. (G.E. America Electronic Navigator)	1	19-052	30	64	630	V.I.R.	L.C.A.B.
Ypo Pilot	1	7-052	30	37	270	V.I.R.	L.C.A.B.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.		
Midship Startplate	1	2Kw	1	7-036	18.2	24	42	V.I.R.	L.C.
Smearing & Milling Mc. Motor	1	2	1	7-036	19	24	30	V.I.R.	L.C.A.B.
Accommodation Vent Fan Motors	2	2.5	1	7-052	23	37	180	V.I.R.	L.C.A.B.
Accommodation Vent Fan Motor	1	2.5	1	19-044	23	53	480	V.I.R.	L.C.A.B.
Shaping Machine Motor	1	2	1	7-036	19	24	30	V.I.R.	L.C.A.B.
Drilling Machine Motor	1	1.5	1	7-036	14.5	24	30	V.I.R.	L.C.A.B.
Saber Motor	1	3	1	7-044	27	31	30	V.I.R.	L.C.A.B.
Grave Motor	1	3.5	1	7-052	32	37	141	V.I.R.	L.C.A.B.
Luminescence Motor	1	10	1	19-064	78	83	162	V.I.R.	L.C.A.B.
Steel Pipe Pump Motor	1	3.5	1	7-052	32	37	162	V.I.R.	L.C.A.B.
Sub. Oil Pump Motor	1	3.5	1	7-052	32	37	160	V.I.R.	L.C.A.B.
Sub. Oil Pump Motor	1	3.5	1	7-052	32	37	132	V.I.R.	L.C.A.B.
Sub. pump motor for Spanner valve	1	4	1	7-052	35	37	180	V.I.R.	L.C.A.B.

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.



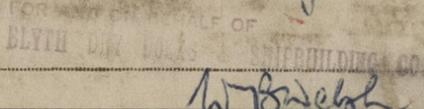
Electrical Contractor

Date 28-2-50.

COMPASSES

Have the compasses been adjusted under working conditions

Yes



Builder's Signature

Date 28-2-50

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

4th June 1948

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The electrical equipment of this ship has been installed under survey and is in accordance with the Requirements of the Rules and approved plans.

The materials used are of good quality, and the workmanship is satisfactory.

The fuses for the 10Kw. generator switchboard - which is situated in the steering gear compartment - were not supplied before the ship sailed from this port. These fuses remain to be examined.

On completion of installation, generators tested for governing and compounding, circuit breakers tested for overload trips. All circuits tested for insulation resistance. All found satisfactory.

Total Capacity of Generators 115 Kilowatts

The amount of Fee ... £ 57 : 5 : 0

When applied for,

19

When received,

19

Travelling Expenses (if any) £

Surveyor to Lloyd's Register of Shipping.

Signature of Surveyor

Committee's Minute

FRI. 21 APR 1950

Assigned

Su F.E. Welch 1950



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