

No. 36309C

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

30 MAY 1953

Writing Report ^{16/3} 19 53 When handed in at Local Office 19 Port of ROTTERDAM
 Survey held at BALNES Date, First Survey 21-11-52 Last Survey 23-3-1953
 (No. of Visits 17)
 on the MV MENGKARA Tons { Gross 1131.64
 Net 501.68
 at BALNES By whom built Messrs. Pat Yard No. 227 When built 3-53
 rs INDONESIAN GOVERNMENT Port belonging to D JAKARTA
 ation fitted by Messrs H. Croon & Co When fitted 3-53
 el equipped for carrying Petroleum in bulk NO Is vessel equipped with D.F. NO E.S.D. YES Gy.C. NO Sub.Sig. NO Radar NO
 have they been submitted and approved YES System of Distribution two wire insulated Voltage of Lighting NO
 g 110 Power 110 D.C. or A.C., Lighting DC Power DC If A.C. state frequency ✓
 Movers, has the governing been found as per Rule when full load is thrown on and off YES Are turbine emergency governors fitted
 trip switch ✓ Generators, are they compound wound YES, and level compounded under working conditions YES
 compound wound state distance between generators ✓ and from switchboard ✓ Are the generators arranged to run
 in parallel YES, 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
 machines under 100 kw. been supplied YES and the results found as per Rule YES
 of Generators ER floor level
 ventilation in way of generators satisfactory YES are they clear of inflammable material and protected from mechanical injury and
 from water, steam and oil YES Switchboards, where are main switchboards placed ER floor level Stbd side
 in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,
 and oil YES, what insulation is used for the panels dead front type Switchboard, if of synthetic insulating
 is it an Approved Type ✓, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as
 Is the construction as per Rule, including locking of screws and nuts YES Description of Main Switchgear
 generator and arrangement of equaliser switches 3 pole CB's (one pole used for equaliser) with 0% protection
win poles and 0% protection in positive pole. CB equipped with preference signal
 switch and fuse gear (or circuit breakers) for each outgoing circuit DP switches & DP fuses
 departments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 4
3 voltmeters ✓ synchronising devices. For compound machines in parallel are the ammeters and reversed current
 in devices connected on the pole opposite to the equaliser connection YES Earth Testing, state means provided earth
making lamps
 s, Circuit Breakers and Fuses, are they as per Rule YES, are the fuses an Approved Type YES
 fuses Weber & EMP. (Eng.) are all fuses labelled YES If circuit breakers are provided for the generators, at what
 do they operate 100% of direct acting and at what current do the reversed current protective devices operate 15% of current
rating generator
 es, Section Boards and Distribution Boards, is the construction as per Rule YES
 re they insulated and protected as per Rule YES, if otherwise than as per Rule are they of an Approved Type ✓
 minimum fall of pressure between bus bars and any point under maximum load < 6%, are the ends of all cables having a sectional
 0.01 square inch and above provided with soldering sockets ✓ Are all paper insulated and varnished cambric insulated
 at the ends ✓ Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil,
 temperatures or risk of mechanical damage YES, are any cables laid under machines or floorplates NO, if so, are they
 y protected ✓ Are cables in machinery spaces, galleys, laundries, etc., lead covered LC & MWB or run in conduit NO
 "HR" type NO State how the cables are supported or protected Machinery spaces: LC cable or LC & MWB
clipped to perforated plating. Cargo holds: MICE (for lighting only) accommodation spaces: VIR LC
clipped to wooden grounds or surface
 id sheaths, armouring and conduits effectually bonded and earthed YES Are all cables passing through decks and watertight
 provided with deck tubes or watertight glands YES, where unarmoured cables pass through beams, etc., are the holes
 bushed YES Refrigerated chambers, are the cables and fittings as per Rule YES

13 (cont.)

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule... yes Emergency Supply, sta... yes

Emergency generator placed on bridge deck level supplied lighting equipment & emergency bilge pump... yes

Navigation Lamps, are they separately wired... yes controlled by separate double pole switches and fuses... yes Are the switches... yes

a position accessible only to the officers on watch... yes Is an alternative supply provided... yes are they adequately ventilated... yes

Secondary Batteries, are they constructed and fitted as per Rule... yes state battery capacity in ampere hours... yes

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... yes Are all fittings suitably ventilated... yes

and where are the controlling switches fitted... yes are they of the carbon arc or of the filament type... yes

Searchlight Lamps, No. of... one whether fixed or portable... fixed are the frames effectually earthed... yes

Heating and Cooking, is the general construction as per Rule... yes Motors, are all motors constructed and installed as per Rule and placed in well... yes

accommodation of the convection type... yes 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... yes

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

Control Gear and Resistances, are they constructed and fitted as per Rule... yes Lightning Conductors, where required are they fitted... yes

Rule... Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such... yes

complied with... yes are all fuses of an Approved Cartridge Type... yes Are the fittings... yes

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 state maker... MS 21 b location of transmitter... DB Frame 63-64 and receiver... DB Frame 64

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.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN A-B-C...	3	Smit	60	115	522	1200	Diesel	Kromhout
EMERGENCY D... ROTARY TRANSFORMER	1	Smit	18	120	150	1000	"	"

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 ...	60	2	100	522	670	32-52	MI	CC
" " EQUALISER ...		1	100					
EMERGENCY GENERATOR ...	18	1	40	150	202	12	MI	CC
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR...								

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

DESCRIPTION.							
Supplied From Main Switchboard	1	50	150	225	34	MI	CC
Emergency switchboard	1	5	14	48	34	MI	CC
D.F.B. Ventilating Fans Engine room "1"	1	8	25	80	32	MI	CC
S.B. Power Workshop Engine room "2"	1	50	195	225	42	MI	CC
S.B. Cargo- & Boat Winches "6"	1	8	54	80	34	MI	CC
S.B. Power Engine room "7"	1	8	54	80	34	MI	CC
Supplied From Emergency Switchboard							
S.B. Domestic Service & Ventilating Fans AS "5A+5B" 1	1	16	70	115	48	MI	CC
S.B. Domestic Service & Ventilating Fans FS "4A+4B" 1	1	16	75	115	25	MI	CC
S.B. Refrigerating Installation "3"	1	8	30	80	70	MI	CC
D.F.B. Lighting Aftership "C1+C2"	1	16	55	115	73	MI	CC
D.F.B. Navigation & Aux. Nav. "A1+A2"	1	8	35	80	50	MI	CC

Distribution Cables (Cont.)

Lighting Mid- & Foreship "B1+B2+B3"

Lighting Engine room "E"

Lighting Engine room "D"

Navigation "A1"

Heating, Wireless, Navigation Lights, Etc. Cables (Cont.)

View Screen	1	1.5	1	9.5	30	VIR	LC & MWB
Lead from Nav. Board "A1"							
Headlight Fore "1"	1	1.5	0.4	9.5	44	VIR	HR Type
Headlight Fore "2"	1	1.5	0.4	9.5	40	VIR	HR Type
Light st. Bd.	1	1	0.4	5	30	MI	CC
Light Port	1	1	0.4	5	20	MI	CC
Headlight After	1	1	0.4	5	30	MI	CC
Light	1	1	0.4	5	120	MI	CC
ing Lamp	1	1.5	1.2	9.5	60	VIR	HR Type

Motor Cables (Cont.)

No.	B.H.P.						
ilating Fan 6	1	0.13	1	2	1.75	15	30 MI CC
ilating Fan 7	1	5	1	8	37.8	80	26 MI CC
ilied From S.B. "3"							
Compressor	1	2.7	1	5	23.2	48	42 MI CC
Fan Vegetables Room	1	0.1kW	1	1	0.6	5	16 MI CC
Cooling Waterpump	1	1/3	1	1.5	3.6	9.5	6 VIR LC & MWB
ing water cooler	1	0.5	1	2	5.2	15	14 MI CC
an Heatroom	1	0.2kW	1	1	1.5	5	45 MI CC

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return ^{feet}), m.	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.			
ied From main Switchboard							
Oil Heater	1	8	44	80	38	MI	CC
ied From Emergency Switchboard							
ss	1	10	30	94	40	MI	CC
r (Not yet Fitted)	1	3.2	14	30	22	MI	CC
ied From S.B. "7"							
online Filter "1"	1	3.2	15	30	20	MI	CC
online Filter "2"	1	3.2	15	30	24	MI	CC
ied From S.B. "5A+5B"							
Machine Pantry 1st Cl. Pass.	1	2.5	9	16.5	38	VIR	LC & MWB
Machine Pantry 2nd Cl. Pass.	1	2.5	9	15.5	36	VIR	LC & MWB
Machine Off. Galley	1	2	9	15	34	MI	CC
Receptacle Pantry 1st Cl. Pass.	1	1.5	5	9.5	38	VIR	LC & MWB
Receptacle Pantry 2nd Cl. Pass.	1	1.5	5	9.5	36	VIR	LC & MWB
ied From S.B. "4A+4B"							
Receptacle Pantry Off.	1	1.5	5	9.5	14	VIR	LC & MWB
ier Hospital	1	2.5	6	15	34	VIR	LC & MWB
Machine Pantry Off.	1	2.5	10	15	14	VIR	LC & MWB
r Hospital	1	3.2	20	30	24	MI	CC
ied From Aux. Nav. Board "A2"							
Lamps Upperbridgedeck	1	1	4	5	60	MI	CC
Lamps Bridge deck	1	1	4	5	30	MI	CC
ch Light	1	2	10	15	30	MI	CC
elling Lamp	1	1.5	3	9.5	10	VIR	LC & MWB
indicator	1	1	0.5	5	20	MI	CC
ounder	1	1.5	5	9.5	16	VIR	LC & MWB
al Alarm	1	1	1	5	10	MI	CC

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
ied From Main Switchboard									
e Saltwaterpump	1	17	1	40	128	202	40	MI	CC
lass	1	30	1	100	220	335	114	MI	CC
st pump	1	17	1	40	128	202	36	MI	CC
ral Service pump	1	17	1	40	128	202	34	MI	CC
Lubricating Oil Pump	1	2	1	8	17.6	80	46	MI	CC
Oil Transfer pumps	2	5	1	8	38	80	50-52	MI	CC
Can	1	12	1	25	92	150	94	MI	CC
ing Engine Pump motor	1	4	1	8	31	80	100	MI	CC
mpressors	2	12	1	16	90	115	26-34	MI	CC
ied From Emergency Switchboard									
rophor pumps	3	15-16	1	3.2	13-14.3	30	56-74	MI	CC
ied From D.F.B. "1"									
lating fans	2	0.92	1	2	7	15	18-20	MI	CC
ied From S.B. "2"									
he	1	1.5	1	3.2	13	30	22	MI	CC
ing machine	1	0.75	1	2	7	15	11	MI	CC
ter	1	0.75	1	2	6.2	15	12	MI	CC
ied From S.B. "6"									
o Winches	3	15	1	25	111	150	56-76	MI	CC
Winches	5	6.3	1	8	51	80	26-80	MI	CC
ied From S.B. "7"									
online Filter pumps	2	0.25	1	2	3	15	20-24	MI	CC
e Lubricating Oil Pump	1	2	1	3.2	17.6	30	30	MI	CC
ied From S.B. "5A+5B"									
lating Fan 2	1	0.54	1	2	6.5	15	30	MI	CC
lating Fan 3	1	0.062	1	2	0.82	15	30	MI	CC
lating Fan 1	1	3.5	1	5	27	48	32	MI	CC
Pantry 1st Cl. Pass.	1	0.25	1	1.5	2.6	9.5	24	VIR	LC & MWB
Pantry 2nd Cl. Pass.	1	0.25	1	1.5	2.6	9.5	36	VIR	LC & MWB
Fans oil Burners Crew's Galley	2	0.03kW	1	2	0.5	15	56	MI	CC
ans oil Burners Off. Galley	2	0.03kW	1	2	0.5	15	38	MI	CC
ied From S.B. "4A+4B"									
Captain's Dayroom	1	0.25	1	1.5	2.6	9.5	30	VIR	LC & MWB
Pantry Off.	1	0.25	1	1.5	2.6	9.5	10	VIR	LC & MWB
ing watercooler	1	0.5	1	2	5.2	15	54	MI	CC

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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.

N.V. Rotterdamsche Electriciteits Mij.
v/h H. CROON & Co.

Electrical Contractors.

Date 25-3-53

COMPASSES.

Have the compasses been adjusted under working conditions. Yes

N.V. SCHEEPSBOUWWERF GEBRs. POT

Builder's Signature.

Date 2-4-53

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

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

Plans. Are approved plans forwarded herewith. no If not, state date of approval. 22-7-1952

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

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

The electrical equipment of this vessel has been installed under special survey in accordance with the Society's Rules, Secretary's letters and approved plan or equivalent thereto.

The materials used are of a good quality and the design and workmanship are good.

On completion the equipment has been tried out under full working conditions and found satisfactory.

This equipment is in my opinion suitable for a classed vessel.

Total Capacity of Generators 198 Kilowatts.

The amount of Fee ... £ 789. = When applied for, 21-5-1953

Travelling Expenses (if any) £ 103.50 When received, 19

Committee's Minute FRI. 19 JUN 1953

Assigned See F.E. maly. rpt.

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