

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 BOLNES Date, First Survey 21-11-52 Last Survey 23-3-19 53
(No. of Visits 17)

54 on the MV MENGKARA Tons { Gross 1131.64 Net 501.68

at BOLNES By whom built Messrs Pat Yard No. 927 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 NO 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 YES 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

parallel YES, are shunt field regulators provided YES Is the compound winding connected to the negative or positive pole

relative 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

per Rule YES 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/c protection

win poles and R/c protection in positive pole. CB equipped with preference signal

switch and fuse gear (or circuit breakers) for each outgoing circuit DP switches & DP fuses

partments 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

devices connected on the pole opposite to the equaliser connection YES Earth Testing, state means provided earth

rating 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 25% with time delay, and at what current do the reversed current protective devices operate 15% of current rating generator

boxes, Section Boards and Distribution Boards, is the construction as per Rule YES

are they insulated and protected as per Rule YES, if otherwise than as per Rule are they of an Approved Type

maximum 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

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

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: CC cable or LC & MWB

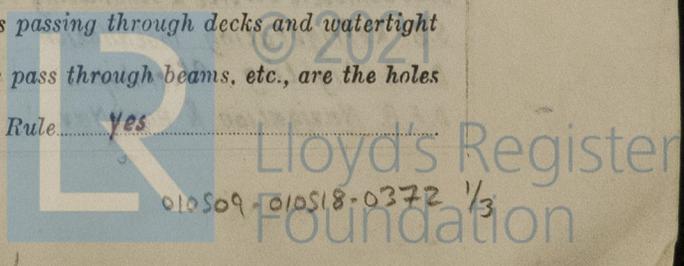
clipped to perforated plating. Cargo holds: MICC (for lighting only) accommodation spaces: VIR LC

and 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



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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes Emergency Supply, sta
Emergency generator placed on bridgedeck level supplied lighting equipment & emergency bilge pump
 Navigation Lamps, are they separately wired yes controlled by separate double pole switches and fuses yes Are the switches at
 a position accessible only to the officers on watch yes, is an automatic indicator fitted yes Is an alternative supply provided
 Secondary Batteries, are they constructed and fitted as per Rule yes, are they adequately ventilated
 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, weatherproo
 Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present
 if so, how are they protected yes Are all fittings suitably ventilated
 and where are the controlling switches fitted yes Are they of the carbon arc or of the filament type Filament
 Searchlight Lamps, 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 yes, are the frames effectually earthed yes, are hea
 accommodation of the convection type yes Motors, are all motors constructed and installed as per Rule and placed in well
 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
 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
 Control Gear and Resistances, are they constructed and fitted as per Rule yes Lightning Conductors, where required are they fi
 Rule yes Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such
 complied with yes, are all fuses of an Approved Cartridge Type yes, make of fuse yes Are the fitting
 rooms, tween deck spaces, etc., in accordance with the special requirements for such ships yes Are the cables lead covered as per Rule
 E.S.D., if fitted static maker MS 21 b location of transmitter DB frame 63-64 and receiver DB frame 6
 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).	INSULA-TION.	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
" " EQUALISEE		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.	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).	INSULA-TION.	PROTECTIVE COVERING.
Supplied From Main Switchboard							
Emergency switchboard	1	50	150	225	34	MI	CC
D.F.B. Ventilating Fans Engine room "1"	1	5	14	48	34	MI	CC
S.B. Power Workshop Engine room "2"	1	8	25	80	32	MI	CC
S.B. Cargo- & Boat Winches "6"	1	50	195	225	42	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	16	70	115	48	MI	CC
S.B. Domestic Service & Ventilating Fans FS "4A+4B"	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

13 (cont.)

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Distribution Cables (Cont.)							
Lighting Mid- & Foreship "B1+B2+B3"	1	8	45	80	84	MI	CC
Lighting Engine room "E"	1	3.2	16	30	32	MI	CC
Lighting Engine room "D"	1	2	11	15	16	MI	CC
Navigation "A1"	1	2	3	15	40	MI	CC
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	90	MI	CC
Light	1	1	0.4	5	120	MI	CC
ing Lamp	1	1.5	1.2	9.5	60	VIR	HR Type

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).	INSULA-TION.	PROTECTIVE COVERING.		
Motor cables (Cont.)									
Ventilating Fan 6	1	0.13	1	2	1.75	15	30	MI	CC
Ventilating Fan 7	1	5	1	8	37.8	80	26	MI	CC
Lead 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 water pump	1	13	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.			
led From main switchboard							
Oil Heater	1	8	44	80	38	MI	CC
led From Emergency switchboard							
ss	1	10	30	94	40	MI	CC
(Not yet Fitted)	1	3.2	14	30	22	MI	CC
led 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
led 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
led From S.B. "4A+4B"							
Receptacle Pantry Off.	1	1.5	5	9.5	14	VIR	LC & MWB
er 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
led 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
erindicator	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.							
led From Main Switchboard									
Saltwaterpump	1	17	1	40	128	202	40	MI	CC
lass	1	30	1	100	220	335	114	MI	CC
stump	1	17	1	40	128	202	36	MI	CC
ral Servicepump	1	17	1	40	128	202	34	MI	CC
Lubricating Oil Pump	1	2	1	8	17.6	80	46	MI	CC
Oil Transferpumps	2	5	1	8	38	80	50-52	MI	CC
Can	1	12	1	25	92	150	94	MI	CC
ing Engine Pumpmotor	1	4	1	8	31	80	100	MI	CC
ompressors	2	12	1	16	90	115	26-34	MI	CC
led From Emergency Switchboard									
rophor pumps	3	15-16	1	3.2	13-14.3	30	56-74	MI	CC
led From D.F.B. "1"									
lating fans	2	0.92	1	2	7	15	18-20	MI	CC
led From S.B. "2"									
ne	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
led 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
led From S.B. "7"									
online Filterpumps	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
led 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
led 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

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.

DIR

Electrical Contractors.

Date 2-5-53

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 No 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.

2m.3.40.—Transfer. (MADE AND PRINTED IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Total Capacity of Generators 198 Kilowatts.

The amount of Fee ... £ 789.- When applied for, 2-5-1953

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

Committee's Minute FRI. 19 JUN 1953

Assigned See F.E. maly, rpt.

Whall (Hvd. BLUIS)
Surveyor to Lloyd's Register of Shipping.



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