

NOV 1953

Rpt. 13.

No. 86805^a.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 19... When handed in at Local Office 12. 11. 1953 Port of Rotterdam
 No. in Survey held at Zaltbommel Date, First Survey 5-9-52 Last Survey 6-7-1953
 Reg. Book. (No. of Visits 11)
 04528 on the M.V. BURDJAMHAL Tons { Gross 1131.64
 Net 591.60
 Built at Zaltbommel By whom built yard, de Waal Yard No. 642 When built 1953
 Owners INDONESIAN GOVERNMENT Port belonging to DJAKARTA
 Installation fitted by Messrs H. Croon & Co When fitted 1953
 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. no Radar yes

Plans, have they been submitted and approved yes System of Distribution two wire insulated Voltage of Lighting 110
 Heating 110 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
 Are the generators arranged to run in parallel yes Is the compound winding connected to the negative or positive pole negative pole
 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 ER floor level
 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 ER floor level Stbd side

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 switchboard, 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 3 pole CB's (one pole used for equaliser) with O/C protection
 in twin poles and R/C protection in positive pole CB equipped with preference signal
 and the switch and fuse gear (or circuit breakers) for each outgoing circuit DP switches and DP fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 4
 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 earth
 indicating lamps Preference Tripping, state if provided /, and tested /
 Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type yes
 make of fuses Weber & EMP (Eng.) are all fuses labelled yes If circuit breakers are provided for the generators, at what
 overload do they operate 100% direct acting 25% with time delay, and at what current do the reverse current protective
 devices operate 15% current rating generator 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 < 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 no, if so, are they adequately protected / State
 type of cables (if in conduit this should also be stated) in machinery spaces MICC & VIR.LC & MWB, galleys MICC
 and laundries / State how the cables are supported or protected Machinery spaces: CC cable or
 LC & MWB cable clipped to perforated plating. Cargo holds: MICC (for lighting only)
 Accommodation spaces: VIR.LC clipped to wooden grounds or surface

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
 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 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 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 state battery capacity in ampere hours 110 Where required to do so does it comply with 1948 International Convention yes

Lighting, is fluorescent lighting fitted yes If so, state nominal lamp voltage 110 and compartments where lamps are fitted Drawingroom

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 fixed are they of the carbon arc or of the filament type filament type

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 yes 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 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

Lightning Conductors, where required are they fitted as per Rule yes

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

E.S.D., if fitted state maker MS 214 & MS 219 location of transmitter and receiver frame 73-74 DB

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.
			Kw per Generator.	Volts.	Ampères.	Revs per Min.		
MAIN GENERATOR	3	Smit	60	115	522	1200	Diesel	Kromhout
EMERGENCY ROTARY TRANSFORMER	1	Smit	18	120	150	1000	Diesel	Kromhout

GENERATOR CABLES:

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) 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	60	2	100	522	670	32-52	MI	CC
" EQUALISER			1	100					
EMERGENCY GENERATOR	1	18	1	40	150	202	12	MI	CC
ROTARY TRANSFORMER MOTOR GENERATOR									

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

DESCRIPTION.	No. of	Kw.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES. In the Circuit.	Rule.	APPROX. LENGTH (lead plus return) in ft.	INSULATION.	PROTECTIVE COVERING.
SUPPLIED FROM MAINSWITCHBOARD									
EMERGENCY SWITCHBOARD	1	50		150	225	44		MI	CC

DISTRIBUTION CABLES

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) 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.			
SUPPLIED FROM SB "2"							
STREAMLINE FILTER 1	1	3.2	15	30	20	MI	CC
STREAMLINE FILTER 2	1	3.2	15	30	24	MI	CC
SUPPLIED FROM SB "4"							
COFFEE-MACHINE OFF GALLEY	1	2	9	15	20	MI	CC
RECEPTACLE 1 IRONING ROOM	1	1	4.5	5	36	MI	CC
BOILER HOSPITAL	1	3.2	14	30	40	MI	CC
STERILIZER	1	2.5	5	15.5	40	VIR	LC & MWB
RECEPTACLE PANTRY PETTY OFF.	1	1.5	5	9.5	46	VIR	LC & MWB
COFFEE-MACHINE PANTRY PETTY OFF.	1	2.5	9	15.5	46	VIR	LC & MWB
RECEPTACLE 2 IRONING ROOM	1	1	4.5	5	38	MI	CC
RECEPTACLE 3 IRONING ROOM	1	1	4.5	5	44	MI	CC
RECEPTACLE 1 LAUNDRY	1	2	9	15	26	MI	CC
RECEPTACLE 2 LAUNDRY	1	2	9	15	30	MI	CC
SUPPLIED FROM DFB "4A"							
RECEPTACLE PANTRY OFF.	1	1.5	5	9.5	24	VIR	LC & MWB
COFFEE-MACHINE PANTRY OFF.	1	2.5	9	15.5	24	VIR	LC & MWB
RECEPTACLE PANTRY CREW	1	1.5	5	9.5	18	VIR	LC & MWB
COFFEE-MACHINE PANTRY CREW	1	2.5	9	15.5	16	VIR	LC & MWB
SUPPLIED FROM AUX. NAV. BOARD "A2"							
BOATLAMPS UPPER BRIDGEDECK AFTER	1	1	4	5	60	MI	CC
BOATLAMPS UPPER BRIDGEDECK FORE	1	1	4	5	30	MI	CC
SEARCHLIGHT	1	2	9	15	20	MI	CC
ECHOSOUNDER	1	1.5	5	9.5	16	VIR	LC & MWB
DEEPSEA ECHOSOUNDER	1	1.5	5	9.5	16	VIR	LC & MWB
RUDDER INDICATOR	1	1	0.5	5	16	MI	CC
GENERAL ALARM	1	1	1	5	12	MI	CC
CLEAR VIEW SCREEN	1	1.5	1	9.5	20	VIR	LC & MWB
DIRECTION FINDER	1	1.5	1	9.5	14	VIR	LC & MWB
SUPPLIED FROM NAVIGATION BOARD "A1"							
MASTHEADLIGHT FORE 1	1	1	0.4	5	44	MI	CC
MASTHEADLIGHT FORE 2	1	1	0.4	5	40	MI	CC
SIDELIGHT STBD	1	1	0.4	5	30	MI	CC
SIDELIGHT PORT	1	1	0.4	5	20	MI	CC
MASTHEADLIGHT AFTER	1	1	0.4	5	100	MI	CC
STERNLIGHT	1	1	0.4	5	134	MI	CC
FLASHING LAMP	1	1.5	1.2	9.5	30	VIR	LC & MWB
SIGNALLING LAMP	1	1.5	3	9.5	20	VIR	LC & MWB

MOTOR CABLES

DESCRIPTION.	No.	B.H.P.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES. In the Circuit.	Rule.	APPROX. LENGTH (lead plus return) in ft.	INSULATION.	PROTECTIVE COVERING.
SUPPLIED FROM SB "3"									
REFR. COMPRESSOR	1	2.7	1	5	23.2	48	40	MI	CC
REFR. FAN VEGETABLES ROOM	1	0.1 kW	1	1	1	5	36	MI	CC
REFR. COOLING WATER PUMP	1	0.5	1	2	3.6	15	40	MI	CC
REFR. FAN MEAT ROOM	1	0.2 kW	1	1	1.5	5	45	MI	CC
SUPPLIED FROM SB "4"									
VENT. FANS OIL BURNERS OFF'S GALLEY	2	0.03 kW	1	2	0.5	15	30	MI	CC
REFR. PANTRY PETTY OFF.	1	0.25	1	1.5	2.6	9.5	42	VIR	LC & MWB
VENT. FANS OIL BURNERS CREW'S GALLEY	2	0.03 kW	1	2	0.5	15	80	MI	CC
SUPPLIED FROM DFB "4A"									
REFR. PANTRY OFF.	1	0.25	1	1.5	2.6	9.5	16	VIR	LC & MWB
DRINKING WATER COOLER	1	0.5	1	1.5	5.2	9.5	10	VIR	LC & MWB
REFR. CAPTAIN'S DAY ROOM	1	0.25	1	1.5	2.6	9.5	26	VIR	LC & MWB

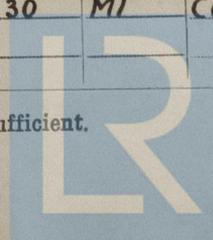
DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.).

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return ¹⁰⁰⁰ 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.			
<u>SUPPLIED FROM MAINSWITCHBOARD</u>							
SB POWER WORKSHOP ENGINE ROOM "1"	1	8	25 ✓	80	24	MI	CC
SB VENTILATING FANS "5"	1	32	156 ✓	170	31	MI	CC
SB CARGO & BOATWINCHES "6"	1	50	199 ✓	225	31	MI	CC
SB POWER ENGINE ROOM "2"	1	8	54 ✓	80	40	MI	CC
<u>SUPPLIED FROM EMERGENCY SWITCHBOARD</u>							
SB REFRIGERATING INSTALLATION "3"	1	8	28 ✓	80	70	MI	CC
SB DOMESTIC SERVICE "4"	1	25	80 ✓	150	36	MI	CC
DFB LIGHTING ENGINE ROOM "E"	1	3 ²	17 ✓	30	41	MI	CC
DFB NAVIGATION "A1"	1	2	4 ✓	15	35	MI	CC
DFB NAVIGATION & AUX. NAVIGATION "A1+A2"	1	8	45 ✓	80	48	MI	CC
DFB LIGHTING MIDSHIP & FORESHIP "B1+B2"	1	8	55 ✓	80	82	MI	CC
DFB LIGHTING AFTERSHIP "C1+C2"	1	16	58 ✓	115	100	MI	CC
DFB LIGHTING ENGINE ROOM "D"	1	2	13 ✓	15	30	MI	CC
<u>SUPPLIED FROM SB "4"</u>							
DFB DOMESTIC SERVICE "4A"	1	10	35 ✓	24	54	MI	CC
<u>SUPPLIED FROM MAINSWITCHBOARD</u>							
FUEL OIL HEATER	1	8	44 ✓	80	36	MI	CC
<u>SUPPLIED FROM EMERGENCY SWITCHBOARD</u>							
FILM INSTALLATION	1	5	15 ✓	48	60	MI	CC
CHARGING BOARD	1	8	8 ✓	80	41	MI	CC
GYROCOMPASS	1	2	5 ✓	15	27	MI	CC
RADAR	1	3 ²	11 ✓	30	27	MI	CC
WIRELESS	1	10	30 ✓	94	17	MI	CC
SALLOG	1	1	3 ² ✓	5	27	MI	CC

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
<u>SUPPLIED FROM MAINSWITCHBOARD</u>									
SPARE SALTWATER PUMP	1	17	1	40	128 ✓	202	39	MI	CC
WINDLASS	1	30	1	100	220 ✓	335	100	MI	CC
BALLAST PUMP	1	17	1	40	128 ✓	202	34	MI	CC
GENERAL SERVICE PUMP	1	17	1	40	128 ✓	202	33	MI	CC
SPARE LUBRICATING OIL PUMP	1	2	1	5	17 ⁶ ✓	48	46	MI	CC
FUEL OIL TRANSFER PUMPS	2	5	1	8	38 ✓	80	56-58	MI	CC
FUEL OIL PURIFIER	1	3	1	5	23 ² ✓	48	46	MI	CC
CAPSTAN	1	12	1	25	92 ✓	150	96	MI	CC
STEERING ENGINE PUMP MOTOR	1	4	1	8	31 ✓	80	104	MI	CC
AIR COMPRESSORS	2	12	1	16	90 ✓	115	27-30	MI	CC
<u>SUPPLIED FROM EMERGENCY SWITCHBOARD</u>									
HYDROPHOR PUMPS	3	1.5-1.6	1	3 ²	13-14 ³	30	69-86	MI	CC
EMERGENCY BILGE PUMP	1	13	1	25	100 ✓	150	57	MI	CC
<u>SUPPLIED FROM SB "1"</u>									
LATHE	1	1.5	1	3 ²	13 ✓	30	12	MI	CC
DRILLING MACHINE	1	0.75	1	2	6 ² ✓	15	6	MI	CC
GRINDER	1	0.75	1	2	6 ² ✓	15	6	MI	CC
<u>SUPPLIED FROM SB "5"</u>									
VENT. FANS 4+5	2	0.92	1	2	7 ✓	15	32-44	MI	CC
VENT. FAN 1	1	5	1	5	37 ⁸ ✓	48	64	MI	CC
VENT. FAN 7	1	7.5	1	8	59 ✓	80	68	MI	CC
COMPRESSOR AIRCOND.	1	3	1	5	25 ⁶ ✓	48	96	MI	CC
VENT. FAN 2	1	0.54	1	2	5 ⁵ ✓	15	32	MI	CC
VENT. FAN AIRCOND.	1	0.75	1	5	7 ² ✓	48	70	MI	CC
VENT. FAN 3	1	0.052	1	2	0.5 ✓	15	32	MI	CC
COOLING WATER PUMP AIRCOND.	1	0.5	1	2	4 ⁹ ✓	15	60	MI	CC
VENT. FAN 6	1	0.13	1	2	1.75 ✓	15	60	MI	CC
<u>SUPPLIED FROM SB "6"</u>									
CARGO WINCHES	3	15	1	25	111 ✓	150	72-76	MI	CC
BOAT WINCHES	6	6.3	1	8	51 ✓	80	22-78	MI	CC
<u>SUPPLIED FROM SB "2"</u>									
STREAMLINE FILTER PUMPS	2	0.25	1	2	3 ✓	15	20-24	MI	CC
SPARE LUBRICATING OIL PUMP	1	2	1	3 ²	17 ⁶ ✓	30	30	MI	CC

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.



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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. Rotterdamse Electriciteits Mij
v/h H. CROON & Co

Electrical Contractors.

Date 23-7-53.

COMPASSES.

Have the compasses been adjusted under working conditions yes

SCHEEPSWERF "DE WAAL" N.V.

Builder's Signature.

Date

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 1

Plans. Are approved plans forwarded herewith no If not, state date of approval 24-12-1952

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 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

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

noted as
17/11/53

Total Capacity of Generators 198 Kilowatts.

The amount of Fee ... £4,789.- =: When applied for, 12.11. 1953

Travelling Expenses (if any) £133,50 =: When received, 19

W. H. L. U. S.
(Hvd 5LU15)
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned See Dja Ref. 3849.

2m.8.50.—TRANSFORMER (MADE AND PRINTED IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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