

Rpt. 13.

No. 677e.

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

JUN 1952

Date of writing Report 12-5-1952 When handed in at Local Office 12-5-1952 Port of GRONINGEN

No. in Survey held at WATERHUIZEN Date, First Survey 20.1.52 Last Survey 9.5.1952  
Reg. Book. (No. of Visits 12)

on the M.V. "ZAMRUD"

Tons Gross 404.69 Net 245.86

Built at WATERHUIZEN By whom built SCHW. GEBR. V. DIEPEN N.V. Yard No. 918 When built 1952

Owners Government of the Republic of Indonesia Port belonging to DJAKARTA

Installation fitted by MESSRS. FEKELS - HODGEZAND When fitted 1952

Is vessel equipped for carrying Petroleum in bulk NO Is vessel equipped with D.F. YES E.S.D. YES Gy.C. NO Sub.Sig. NO Radar NO

Plans, have they been submitted and approved YES System of Distribution TWO WIRE INSULATED Voltage of Lighting 110

Heating NO Power 110 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 YES Generators, are they compound wound YES, and level compounded under working conditions YES

Are the generators arranged to run in parallel NO Is the compound winding connected to the negative or positive pole YES

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing YES 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 PORT & STBD SIDE

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 AGAINST FORWARD BULKHEAD PORT 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 SWITCH BOARD, 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 YES 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 DP FUSES (HRC-TYPE) & DP SWITCH

and the switch and fuse gear (or circuit breakers) for each outgoing circuit DP DT-SWITCH & DP FUSES

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 2 ammeters 2 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 FOR EACH BUSBAR SYSTEM Preference Tripping, state if provided YES, and tested YES Switches, Circuit Breakers and Fuses, are they as per Rule YES, are the fuses an Approved Type YES (KEMA APPROV) make of fuses WEBER, are all fuses labelled YES If circuit breakers are provided for the generators, at what overload do they operate YES, and at what current do the reverse current protective devices operate YES

Cables, are they insulated and protected as per Rule YES, if otherwise than as per Rule are they of an Approved Type YES, state maximum fall of pressure between bus bars and any point under maximum load 16% volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends YES

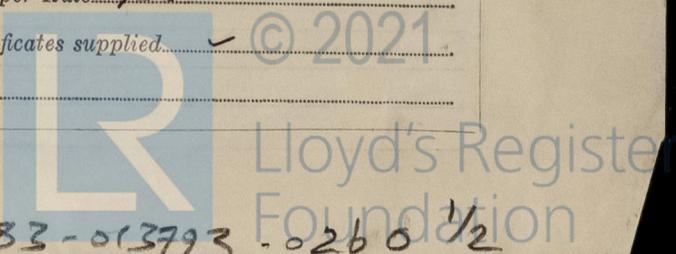
Are all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage YES, are any cables laid under machines or floorplates NO, if so, are they adequately protected YES State type of cables (if in conduit this should also be stated) in machinery spaces HR-TYPE, galleys HR-TYPE, and laundries YES

State how the cables are supported or protected MACH SPACES: HR-TYPE CABLE CLIPPED TO PERFORATED PLATING - TWEEN DECK SPACES: HR-TYPE CABLE RUN IN CONDUIT - CARGO HOLDS: HR-TYPE CABLE RUN IN CONDUIT - ACCOMMODATION SPACES: L.P. CABLE CLIPPED TO WOOD GROUNDS

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 YES and test certificates supplied YES

Are the motors accessible for maintenance at all times 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, state position EMERGENCY BATTERY PLACED ON BOAT DECK LEVEL SUPPLIED SEPARATE 24 VOLTS LIGHTING EQUIPMENT

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 120 AH / 24 V / 20 CELLS NIFE Where required to do so does it comply with 1948 International Convention ✓

Lighting, is fluorescent lighting fitted NO If so, state nominal lamp voltage ✓ 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 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 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 HUGHES MS 21 G1 location of transmitter and receiver CARGO HOLD FRAME 64-65

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	MANNSLEY N° 110788/9	20	110	182	1000	DIESEL	LISTER
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	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	2	20	2	70	182	250	17-24	VIR	HR-TYPE
" " EQUALISER									
EMERGENCY GENERATOR									
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.	APPROX. LENGTH (lead plus return-feet).	INSULATION.	PROTECTIVE COVERING.

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

DESCRIPTION.	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.			
SUPPLIED FROM MAIN SWITCHBOARD:							
DEB REFRIGERATING EQUIPMENT	O	1	10	23	38	70	
DEB VENTILATION FANS	C	1	6	18	29	8	
DEB LIGHTING AMID	G	1	6	20	29	60	
DEB NAVIGATION LIGHTING	N	1	25	2	15 <sup>5</sup>	60	
DEB LIGHTING & POWER AMID	K	1	6	18	29	62	
DEB LIGHTING WAREHOUSE	D	1	6	10	29	60	
DEB WIRELESS EQUIPMENT	A	1	6	11	29	80	
DEB LIGHTING & POWER AFT	F	1	6	18	29	32	VIR HR-TYPE
DEB LIGHTING POOD	E	1	6	16	29	50	
HEATER FUEL OIL 24 KW		1	6	22	29	16	
BATTERY CHARGING EQUIPMENT	L	1	25	10	15 <sup>5</sup>	4	
DEB LIGHTING FORESHIP	B	1	6	15	29	80	
DEB LIGHTING AMID	H	1	6	20	29	60	
DEB POWER ER	P	1	6	27	29	12	
LIGHTING ER		1	15	6	9 <sup>5</sup>	70	
LIGHTING ER		1	15	6	9 <sup>5</sup>	60	
CARGO LIGHTING		1	25	10	15 <sup>5</sup>	180	
SUPPLIED FROM DEB NAVIG LIGHTING							
MASTHEAD LIGHT AFT		1	15	03	9 <sup>5</sup>	100	
MASTHEAD LIGHT FORE		1	15	03	9 <sup>5</sup>	110	
STERNLIGHT		1	15	03	9 <sup>5</sup>	114	
STBD SIDELIGHT		1	15	03	9 <sup>5</sup>	18	VIR HR-TYPE
PORT SIDELIGHT		1	15	03	9 <sup>5</sup>	6	
MORSE SIGNALLING LAMP		1	15	03	9 <sup>5</sup>	20	
SUPPLIED FROM DEB WIRELESS EQUIPMENT.							
WIRELESS EQUIP. & DE		1	25	9	15 <sup>5</sup>	6	VIR HR-TYPE
E.S.D.		1	15	2	9 <sup>5</sup>	6	

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
SUPPLIED FROM MAIN SWITCHBOARD								
CABSTAN	9	1	35	76	78	56		
STEERING GEAR	25	1	16	25	49	120	VIR	HR-TYPE
BLW COOLING WATER PUMP	35	1	10	30	38	36		
O.F. TRANSFER PUMP	1	1	25	94	15 <sup>5</sup>	28		
SUPPLIED FROM DEB REFR. EQUIPMENT O								
REFR. COMPRESSOR	2	1	4	17	22 <sup>5</sup>	8		
COOLING WATER PUMP	04	1	25	54	15 <sup>5</sup>	12	VIR	HR-TYPE
CIRCULATING FAN	200W							
CIRCULATING FAN	70W	1	15	04	9 <sup>5</sup>	8		
SUPPLIED FROM DEB POWER ER "D"								
F.W. HYDROFOUR PUMP	1	1	25	88	15 <sup>5</sup>	8		
S.W. " " "	1	1	25	92	15 <sup>5</sup>	10	VIR	HR-TYPE
F.W. " " "	1	1	25	88	15 <sup>5</sup>	12		
SUPPLIED FROM DEB VENTILATION FANS								
CARGO HOLD FAN STBD FORE	165W	1	15	14	9 <sup>5</sup>	90		
" " " PORT "	"	1	15	14	9 <sup>5</sup>	94		
" " " STBD AFT	"	1	15	14	9 <sup>5</sup>	26	VIR	HR-TYPE
" " " PORT "	"	1	15	14	9 <sup>5</sup>	22		
2-VENTILATION FANS ER. EACH	"	1	15	20	9 <sup>5</sup>	50		
VENTILATION FAN ACCOM.	1	1	25	95	15 <sup>5</sup>	32		
SUPPLIED FROM DEB "K" AMID								
VENTILATION FAN ACCOM	1	1	25	88	15 <sup>5</sup>	8	VIR	HR-TYPE

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.

HERMAN G. EEKELS N.V.

P. PROC.

Electrical Contractors.

Date 13-5-52

COMPASSES.

Have the compasses been adjusted under working conditions YES

SCHEEPSWERYEN GEBR. VAN DIEPEN N.V.  
Waterhuizen bij Groningen

Builder's Signature.

Date 13-5-52

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 ✓ 23-11-51

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 conformity with the Society's Rules and Regulations and the approved plans or equivalent sheets. 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.

Noted 22/11 30-6-52

Total Capacity of Generators 40 Kilowatts.

The amount of Fee ... £ 525.- : When applied for, 13.5-1952.

Travelling Expenses (if any) £ 124.- : When received, 19.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 1 JUL 1952

Assigned See F.E. Moly. etc.

2m.850.—Transfer. (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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