

Rpt. 13.

No. 5679

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 20-5 1951 When handed in at Local Office 24-5 1951 Port of Groningen
 No. in Survey held at Meppel Date, First Survey 27-3-'51 Last Survey 17-5-1951
 Reg. Book. (No. of Visits 6)
 on the M.V. "PETO" Tons { Gross 351
 Net 208
 Built at Meppel By whom built Worst & Dutmer Yard No. 101 When built 5-'51
 Owners E. Maay Port belonging to Groningen
 Installation fitted by Herman G. Eekels When fitted 5-'51
 Is vessel equipped for carrying Petroleum in bulk no Is vessel equipped with D.F. yes E.S.D. no 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 110Heating - 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 fittedwith a trip switch - Generators, are they compound wound no, and level compounded under working conditions -if not compound wound state distance between generators - and from switchboard - Are the generators arranged to runin parallel no, are shunt field regulators provided yes Is the compound winding connected to the negative or positive pole- Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing - Have certificates oftest for machines under 100 kw. been supplied yes and the results found as per Rule yesPosition of Generators E.R. floor levelis the ventilation in way of generators satisfactory yes are they clear of inflammable material and protected from mechanical injury anddamage from water, steam and oil yes Switchboards, where are main switchboards placed E.R. above deep waterline-

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 insulatingmaterial is it an Approved Type -, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom asper Rule - Is the construction as per Rule, including locking of screws and nuts yes Description of Main Switchgearfor each generator and arrangement of equaliser switches D.P. fuses & D.P. D.T switch--and the switch and fuse gear (or circuit breakers) for each outgoing circuit D.P. switch & D.P. fuses--Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard twoammeters one voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reversed currentprotection devices connected on the pole opposite to the equaliser connection - Earth Testing, state means providedearth indicating lamps connected to "E" through D.P. fuses & S.P. push buttonSwitches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type yes / KEMA approvedmake of fuses Weber, are all fuses labelled yes If circuit breakers are provided for the generators, at whatoverload do they operate -, and at what current do the reversed current protective devices operate -Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule yesCables, 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 < 60%, are the ends of all cables having a sectionalarea of 0.01 square inch and above provided with soldering sockets yes Are all paper insulated and varnished cambric insulatedcables 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 theyadequately protected - 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 machinery spaces: LC & M.W.B. cableclipped to perforated plating or surface Gargo hold: either LC & M.W.B. cable or cable of the HR typerun in conduit Accommodation spaces: LC cable clipped to surface or wood grounds-Are all lead sheaths, armouring and conduits effectually bonded and earthed yes Are all cables passing through decks and watertightbulkheads provided with deck tubes or watertight glands yes, where unarmoured cables pass through beams, etc., are the holeseffectively 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 — Emergency Supply, state position
battery placed in E.R. above deep waterline supplied main switchboards in case of failing generator supply

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. yes, are they adequately ventilated. yes
state battery capacity in ampere hours. 140 Amp hours lead battery 110 volts

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. no,
if so, how are they protected. —
and where are the controlling switches fitted. — 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. filament type

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. 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. —

Control Gear and Resistances, are they constructed and fitted as per Rule. yes Lightning Conductors, where required are they fitted as per
Rule. — 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. —, 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 the cables lead covered as per Rule. —

E.S.D., if fitted state maker. — location of transmitter. — and receiver. —

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	1.	Heemat	4.5	110	44	1000/1500 Diesel.	Bister	
	1	"	4.5	110	44	1000/1500 main shaft		
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.	Rate.			
MAIN GENERATOR	45	1	16	41 ✓	49	16	V.I.R.	H.R. type
" " EQUALISER	45	1	16	41 ✓	49	16		
EMERGENCY GENERATOR								
ROTARY TRANSFORMER : MOTOR								
" " GENERATOR...								

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

DESCRIPTION
SUPPLIED FROM MAIN SWITCHBOARD

[illegible]

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) $\frac{m}{m}$	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.			
<u>SUPPLIED FROM MAIN SWITCHBOARD.</u>							
lighting forward.	1	2.5	2 ✓	15.5	76	} V.I.R.	E.C. & M.W.B.
lighting wheelhouse & aft. supply navigation	1	2.5	5 ✓	15.5	26.		H.R. type.
lighting E.R.	1	2.5	2 ✓	15.5	24		} L.C. & M.W.B.
lighting E.R.	1	2.5	2 ✓	15.5	24.		
lighting Capt. accommodation	1	1.5	3.5 ✓	9.5	30		
<u>SUPPLIED FROM D.F.B. NAVIGATION</u>							
masthead light	1	2.5	0.4 ✓	15.5	10	} V.I.R.	H.R. type
std. side light	1	2.5	0.4 ✓	15.5	16		
Port side light	1	2.5	0.4 ✓	15.5	16		
stem light	1	2.5	0.4 ✓	15.5	40		
morse signalling light	1	2.5	0.4 ✓	15.5	14		
<u>SUPPLIED FROM D.F.B. Wireless</u>							
direction finder	1	2.5	2 ✓	9.5	3	} V.I.R.	H.R. type
wireless equipment	1	1.5	6 ✓	9.5	12		

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	MOTOR SPEEDS.					MOTOR TYPE.	
<u>SUPPLIED FROM MAIN SWITCHBOARD</u>									
fresh water hydrophor pump	1	0.5	1	1.5	4 ✓	9.5	10	V.I.R.	HR type
<u>SUPPLIED FROM D.F.B. lighting & power.</u>									
air supply fan oil fired furnace	1	0.9amp	1	1.5	0.9 ✓	9.5	24	V.I.R.	L.C. & M.W.B.
air supply fan oil fired boiler C.H.	1	0.9amp	1	1.5	0.9 ✓	9.5	20		

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 *H. G. Eekels*

P. PROC.

Electrical Contractors.

Date

14.6.51.

COMPASSES.

Have the compasses been adjusted under working conditions. *yes*

H. G. Eekels
Builder's Signature.

Date

14.6.51.

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. *24-5-51*

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 conformity with the Society's Rules and Regulations and the approved plan. 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

Note sent 10/7/51

Total Capacity of Generators *9* Kilowatts.

The amount of Fee ...

£ 75.00

When applied for,

16.5.1951

When received,

19

Travelling Expenses (if any) *£ 25.00*

H. G. Eekels *14.6.51*
Surveyor to Lloyd's Register of Shipping.

FRI. 13 JUL 1951

Committee's Minute

Assigned

See Minute on G. C. Rpt.