

# REPORT ON ELECTRIC PROPELLING MACHINERY

No. 22748

of writing Report 19 When handed in at Local Office 19 Received at London Office  
 No. in Survey held at HAARLEM. Port of AMSTERDAM.  
 Book. Date, First Survey 8-9-56 19 Last Survey 13-2-1959.  
 No. of Visits 84  
 415 Single Screw vessel " PILOTO PARDO " Gross 1882.41  
 Triple Tons  
 Quadruple Net 896.86  
 Built at Haarlem By whom built N.V. Haarlemse Scheeps- bouw Mij. Yard No. 552 When built 1958.  
 Electrical Machines made at Slikkerveer By whom made Smit-Electro v.h. W. Generator Nos. 46675-77 When made 1958.  
 Shaft Horse Power at Full Power 1920 Smit Motor Nos. 46678-79  
 Machinery Numeral as per Rule 462 384 Owners Republic of Chile (Dir. General de los Servicios de la Armada de Chile. Port belonging to Valparaiso  
 Made for which Vessel is intended

Material of NS.— Have plans of the Machines, Control Gear, Cables and Circuits been submitted and approved ☒ yes

AM ENGINES.— Type of Engine No. of Engines R.P.M. Is a Governor fitted Is the speed variation as per Rule when load is thrown off Is an Emergency Governor fitted Is it arranged for hand tripping Does it trip the throttle  
 If exhaust steam is admitted, is an automatic shut-off fitted Is provision made for bleed steam and is a non-return or positive  
 Lubricating Oil.— State means provided for emergency supply  
 The emergency supply sufficient to maintain lubrication as per Rule  
 Cause appreciable vibration. Mechanical Balance.— Are the Engines and Generators balanced so as not

ENGINES.— Type of Engines M.A.K. (Germ.) R.P.M. 150 Is a Governor fitted ☒ yes Is the speed variation as per Rule when load is thrown off ☒ yes Is an Emergency Governor fitted ☒ yes Does it operate as per Rule ☒ yes

ERATORS.— Direct or Alternating Current direct No. of Generators 3 If A.C. state frequency at full load ☒ yes  
 per Generator 530 Volts per Generator 400 Amps. per Generator 1330 Have certificates of works tests been  
 Applied ☒ yes and the results found as per Rule ☒ yes Ventilation.— State how arranged (open or closed system) closed system  
 Are ventilating arrangements satisfactory ☒ yes Heating when Idle.— What provision is made heating elements  
 Facilities for Inspection and Repair.— Are these as per Rule ☒ yes

Wear-down gauges supplied ☒ yes Bilges.— Are the arrangements to prevent accumulation of bilge-water under the machines satisfactory ☒ yes  
 ORS.— S.H.P. per Motor at full power 1920 No. of Motors 1 Single or double unit double Volts per Motor 600  
 ps. per Motor 1270 Have certificates of works tests been supplied ☒ yes and the results found as per Rule ☒ yes A.C. Motors.— Is provision made for  
 hining the slip rings ☒ yes Do the Motors remain in synchronism under all normal conditions of running ☒ yes D.C. Motors.— If the system permits  
 speeding at light loads are overspeed protection devices fitted ☒ yes

Excitation.— Is power for excitation taken from the ship's Auxiliary Generators ☒ yes If so, state voltage 440 and excitation amperes at full  
 er 43.1 kilowatts for excitation 28 State excitation arrangements for Propulsion Generators 1 exciter

Propelling Motors 1 exciter Is an alternative means of excitation provided 1 exciter set stand by  
 e certificates of works tests been supplied ☒ yes and found as per Rule ☒ yes

CONTROL.— Position of Main Control Panel platform engine room  
 it comply with the requirements regarding position ☒ yes, grouping of controls ☒ yes, instruments ☒ yes, insulating materials (state type  
 dead front type  
 ng of screws and nuts ☒ yes, labelling ☒ yes, fuses for voltmeters, pilot lamps, etc. ☒ yes, accessibility ☒ yes, position of fuses ☒ yes,  
 e method employed) contactors can be controlled by hand, by means of nylon handle.

letters. possible. ling of instrument cases ☒ yes, provision of renewable tips on switches subject to arcing ☒ yes, capability of withstanding  
 and inclination ☒ yes, operation with high and low voltage ☒ yes, rustproofing of parts. Overload and Short Circuit Protection.— State means  
 ded. Aural alarm & indicating lamps.  
 system prevents overloading.

What load is it set to operate 1800 Amps. Has it been tripped by hand when running at full power and found satisfactory ☒ yes  
 fuses of an approved type ☒ yes

h Detection.— Is the main circuit provided with means for detecting earths ☒ yes Are aural and visual alarms fitted ☒ yes Is main power interrupted  
 earth fault ☒ no If a limiting resistance is in the earth detecting circuit what is the ohmic value 150 What earth leakage current is necessary  
 operate the device 5 If a switch is used to disconnect the aural signal does it automatically give visual indication ☒ yes Are the excitation circuits  
 ided with means for earth detection ☒ yes Mechanical Protection.— Are circuits above 250 volts D.C. or 150 volts A.C. to earth protected as per Rule ☒ yes

ge or Deck Control.— Is bridge control provided ☒ yes If so, from how many stations 2 bridge deck 1 bridge elect. Is an emergency control provided  
 nts or loads in excess of the working capacity of the plant ☒ yes and without reference to electrical instruments ☒ yes  
 e engine room ☒ no and can the transfer to this control be made quickly in the engine room ☒ no Can the emergency control be rendered mechanically  
 pendent of the deck control ☒ yes Instruments and Gauges.— State Instruments provided for each Generator 1 voltmeter and 1 ammeter

Working hours counting meter  
 for each Motor 1 ammeter maincirc. tachometer amp. field c. Is an Insulation Tester provided ☒ yes

Charge Protection.— Are all shunt field circuits protected as per Rule ☒ yes D.C. Systems.— If the Generators are connected in series state means  
 ided to prevent reversal of direction of rotation of the Prime Movers ☒ yes

he Propulsion Generators also used alternatively for other purposes ☒ no If so, is provision made for overload protection, voltage adjustment, etc. ☒ yes

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Reversing Switches.—If any are provided are they interlocked as per Rule...yes Resistances.—Are resistances for synchronous motor fields insulated as per Rule...-- Temperature Alarm.—Are machines with enclosed ventilating system, etc., fitted with temperature alarm...yes

CONDUCTORS & CABLES.—Are all essential Conductors stranded as per Rule...yes Are the ends of Paper and Varnished Cambric Insulated Cable sealed...yes Are all Cables carrying A.C. constructed and installed as per Rule...-- Have all Main Cables been tested by the Surveyors at the maker works...yes

SECONDARY BATTERIES.—Are Batteries used for starting Main Propulsion Engines...-- If so, have full particulars of rating been submitted and approved...-- Have they been tested under working conditions and do they give the required number of starts...-- Are they installed as per Rule...-- Are the charging arrangements satisfactory...--

SPARE GEAR.—If engaged on open sea service has a list of spare gear been submitted and approved...yes Is a list of the articles supplied attached to this report...yes Are they stored as per Rule...yes

### ELECTRIC PROPULSION EQUIPMENT CONDUCTORS.

DESCRIPTION	CONDUCTORS		MAXIMUM CURRENT— AMPERES *			MAXIMUM VOLTAGE	INSULATED WITH	PROTECTIVE COVERING
	No. in parallel per Pole	Sectional Area <div>sq. in. or sq. mm.</div>	In Circuit		Rule			
			When Running	When Manœuvring				
• MAIN GENERATORS								
GENERATOR FIELDS	cold	4 120	1330	1700	1580	400	silicon glass	asbestos
	hot	1 3.5	8	10	30			
		1 3.5	7	8.5	30			
MAIN MOTORS		4 120	1270	1700	1580	600		
MOTOR FIELDS	cold	1 8	68	68	80		"	
	hot	1 8	62	62	80			
CONTROL CIRCUITS								
OTHER CIRCUITS:—								
Interlocking circuits	1	3.5	5	5	30	220 DC	"	
Signalling circuits	1	3.5	2	2	30	117 AC.	"	

\*For field circuits the "Hot" and "Cold" value should be given.

The foregoing is a correct description,

Electrical Engineers.

Date.

17-4-59

COMPASSES.—Are Single-Conductor circuits carrying direct current arranged with lead and return Conductors fitted as close to one another as possible

Have the Compasses been adjusted under working conditions...yes

Builders' Signature.

Date.

16-4-59

Is this machinery duplicate of a previous case...no If so, state name of vessel...--

General Remarks (State quality of workmanship, opinions as to class, &c.)

The electric propulsion installation of this vessel has been installed under Special Survey in conformity with the Society's Rules and Regulations and in accordance with the Secretary's letter and the approved plans 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 for propulsion purposes... 1590 kilowatts.

The amount of Fee ...

When applied for,

When received,

Surveyor to Lloyd's Register of Shipping.

Date.

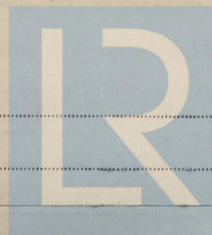
22-4-59

Committee's Minute

FRIDAY 19 JUN 1959

Assigned

See Rpt. 1.



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