

Rpt. 13.

No. 1477

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

116 DEC 1955

Date of writing Report 29th Nov. 19 55 When handed in at Local Office 19 Port of Bremen

No. in Survey held at Bremerhaven Date, First Survey 14th June Last Survey 17th Nov. 19 55
Reg. Book. (No. of Visits 10)

on the M.V. "TARAPACA" Tons { Gross. Net. 11.55

Built at Bremerhaven By whom built Rickmers Werft Yard Yard No. 272 When built 11.55

Owners Corporation De Fomento Port belonging to Valparaiso

Installation fitted by Siemens-Schuckert When fitted 11.55

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. - Radar Yes

Plans, have they been submitted and approved yes System of Distribution two wire insulated Voltage of Lighting 220

Heating 220 Power 220 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 - Generators, are they compound wound yes, and level compounded under working conditions yes, if not compound wound state distance between generators - and from switchboard - Are the generators arranged to run in parallel yes, are shunt field regulators provided yes Is the compound winding connected to the negative or positive pole Port main gen's Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing yes Have certificates of test for machines under 100 kw. been supplied yes and the results found as per Rule yes

Position of Generators E.R. floor P. fwd. - Port aft. inboard & outboard. EM.-Gen. Panel E.R. stbd.

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 main, E.R. floor P. fwd. EM.-, E.R. Panel stbd.

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 material steel 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 see above 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 Triple pole linked circuit breakers with O/C releases in two poles and R/C release in one pole, third pole used for equaliser (all three main gen's), for 25 KW gen.-compr. set double pole linked switch with fuse in each pole.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit double pole linked switch with fuse in each pole.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 5 ammeters 3 voltmeters 1 Ohmmeter 1 For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection yes Earth Testing, state means provided Ohmmeter, see above.

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type yes make of fuses Siemens, are all fuses labelled yes If circuit breakers are provided for the generators, at what overload do they operate 12-13 % and at what current do the reversed current protective devices operate 37 amps.

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule yes

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 less than 6%, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets yes 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 - 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 (Main-generators, LC & m.br. clipped to cable trays) (Machinery spaces LC & m.br. clipped to cable trays or structure) (Accommodation and domestic spaces) LC & m.br. clipped to cable trays or structure) (Minor circuits NGA-Codex placed in wooden lining) (Through holds, LC & m.br. clipped in steel channels).

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 -

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Lloyd's Register
Foundation

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule.....**yes**..... Emergency Supply, state position

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 ampère hours..... 110 Ahrs.

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.

Searchlight Lamps, No. of 1, whether fixed or portable portable, 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.....--....., are heaters in the

accommodation of the convection type. air flow 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. none

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule... yes

Control Gear and Resistances, are they constructed and fitted as per Rule yes Lightning Conductors, where required are they fitted as per Rule yes 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, between deck spaces, etc., in accordance with the special requirements for such ships. Are the cables lead covered as per Rule. **frames 93/95 P.S.**

E.S.D., if fitted state maker **Atlas-Werke BMN** location of transmitter **and** and receiver **Type Monotype C**

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 ...	3	Garbe & Lahmmeyer	80	230	363	500	Diesel	MAN
EMERGENCY ...	1	dto.	25	230	110	750	dto.	MAN
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.	Rmle.			
MAIN GENERATOR s	80	2	120	363	350	20	Rubber	LC 5 met. braided
" " EQUALISER		2	120		350		"	
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EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR	25	1	70	110	125	12	Rubber	LC & met. braided
" " GENERATOR...								

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

[illegible]

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

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.						
Wireless	1	2.5	10	15.5	85	Rubber	LC	& met.	braided	
Cables to distr. boards for power	1									
DB Galley	1	25	56	63	60	"	"	"	"	
DB Winches forward	1	120	175	175	100	"	"	"	"	
		(36 % of 490)								
DB Winches aft	1	95	128	150	85	"	"	"	"	
		(65 % of 196)								
DB Water & oil heaters separators	1	70	115	125	50	"	"	"	"	
Cables to distr. boards for lighting										
DB Nav. lanterns	1	2.5	6	15.5	90	Rubber	LC	& met.	braided	
DB Officers deck	1	6	15	29	80	"	"	"	"	
ATCADAOT/XXXXXXXXXX										
DB main-deck	1	6	15	29	75	"	"	"	"	
DB fore-castle	1	4	6	22.5	140	"	"	"	"	
DB poop-deck	1	4	6	22.5	100	"	"	"	"	
DB boat-deck	1	6	15	29	80	"	"	"	"	

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	KW H.P.								
Steering gear, both feeders	1	2.5	1	4	11.2	22.5	110	Rubber	LC & met. braided	
Fresh & seawater circ.double pump set (main)	2	12	1	25	63	63	35	"	" " "	
Fresh & seawater circ. double pump set (aux.)	1	3	1	4	17	22.5	35	"	" " "	
Ballast pump	1	9.2	1	16	49	49	40	"	" " "	
Bilge pump	1	8.5	1	16	45	49	35	"	" " "	
Fire pump	1	8.1	1	16	43.7	49		"	" " "	
Standby lub. oil pump	1	7.4	1	16	40	49	25	"	" " "	
Oil fuel transfer pump	1	4.8	1	6	37	29	25	"	" " "	
Oil fuel daily serv. pump	1	1.78	1	2.5	10.7	15.5	25	"	" " "	
Winches fwd.	4	18.5	1	50	98	99	var	"	" " "	
Winches aft 2 x	2	18.5	1	50	98	99	var	"	" " "	
Capstan	1	10.5	1	16	56	49	100	"	" " "	
Windlass	1	13.5	1	50	72	99	135	"	" " "	
Indep. air compressor	1	16.2	1	50	87	99	15	"	" " "	

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All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

SIEMENS-SCHUCKERTWERKE
Aktiengesellschaft

Date 2.12.1955

Have the compasses been adjusted under working conditions.

Date.

Is this installation a duplicate of a previous case..... No If so, state name of vessel..... ~~XXXXXXXX~~ ANTOPAGASTA

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith.

The electrical equipment of this vessel has been installed under Special Survey in accordance with the approved plans and the Secretary's letters and the materials and the workmanship are good. On completion the equipment was tried under working conditions, megger tested and found satisfactory. This equipment in my opinion is suitable for a vessel with the notation +LMC.

[illegible]

The amount of Fee *50%* ... £ **81** : **14** : **9**

When supplied from
London 38/1/86

When received,

Surveyor to Lloyd's Register of Shipping.

FRIDAY 10 FEB 1956

Assigned See Rpt. 4 C.