

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.....
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 Port main gen's, 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 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, what material is used for the panels 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

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 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 do-

mestic 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 -

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule... **yes**... Emergency Supply, state position **25 KW emergency generator and emergency switchboard, S.O.**

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... **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... **--**... 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... **--**... 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... **--**... 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... **Atlas-Werke BMN Type Monotype C**... location of transmitter... **and**... and receiver... **frames 93/95 P.S.**

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.	Amps.	Revs. per Min.	TYPE.	MAKER.
MAIN	3	Garbe & Lahmeyer	80	230	363	500	Diesel	MWM
EMERGENCY ROTARY TRANSFORMER	1	dto.	25	230	110	750	dto.	MWM

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.	Rule.			
MAIN GENERATOR	80	2	120	363	350	20	Rubber	LC 5 met. braided
EQUALISER		2	120		350		"	"
EMERGENCY ROTARY TRANSFORMER: MOTOR	25	1	70	110	125	12	Rubber	LC & met. braided
GENERATOR								

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Main to emergency switchboard	2	70	110	250	55	Rubber	LC & met. braided
Shore connection	1	70	100	125	120	"	" " " "

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	"	" " " "
DB Winches aft	1	95	128	150	85	"	" " " "
DB Water & oil heaters separators	1	70	115	125	50	"	" " " "
Cables to distr. boards for lighting	1	2.5	6	15.5	90	Rubber	LC & met. braided
DB Nav. lanterns	1	6	15	29	80	"	" " " "
DB Officers deck	1	6	15	29	75	"	" " " "
DB main-deck	1	4	6	22.5	140	"	" " " "
DB fore-castle	1	4	6	22.5	100	"	" " " "
DB poop-deck	1	4	6	22.5	80	"	" " " "
DB boat-deck	1	6	15	29	80	"	" " " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	KW	AMPERES	Volts.	Revs. per Min.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
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	25	" " " "
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	" " " "

24/1/56

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.

SIEMENS-SCHUCKERTWERKE
Aktiengesellschaft

Electrical Contractors.

Date 2.12.1955

COMPASSES.

Have the compasses been adjusted under working conditions... YES

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. ~~ANTOFAGASTA~~

Plans. Are approved plans forwarded herewith... yes If not, state date of approval. 27

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

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 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, meggertested and found satisfactory. This equipment in my opinion is suitable for a vessel with the notation +LMC.

Table with multiple columns containing technical specifications and measurements for various electrical components.

Total Capacity of Generators... Kilowatts.

The amount of Fee £ 81 : 14 : 9

When applied for from London 30/1/56

Travelling Expenses (if any) £ 9 : 15 : 0

When received, 19

S. R. Matthews

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRIDAY 10 FEB 1956

Assigned See Rpt. 46.

2m.9.48.-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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