

REPORT ON ELECTRICAL EQUIPMENT

No. 22740

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 19 When handed in at Local Office 19 Received at London Office

No. in Survey held at Haarlem Reg. Book Date, First Survey 8-9-1956 Last Survey 13-2-1959

Port of AMSTERDAM

2/91415 on the "PILOTO PARDO" (No. of Visits 84)

Built at Haarlem By whom built Haarlemsche Scheepsbouw Mij. N.V. Tons { Gross 1882.41 Net 896.86

Owners Republic of Chile (Dir. Generale de Port belonging to Valparaiso) Los Servicios de la Armada de Chile

Installation fitted by Sterel & Wechelaar N.V. When fitted 1958

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

Plans, have they been submitted and approved yes System of Distribution three wire insulated Voltage of Lighting 117

Heating -- Power 440 D.C. or A.C. Lighting A.C. Power A.C. If A.C. state frequency 60

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 selfreg. type, and level compounded under working conditions --

Are the generators arranged to run in parallel yes Is the compound winding connected to the negative or positive pole --

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 Engine room

Port and starboard

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 Engine room

platform starboard

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, 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 -- 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 circuit breaker with reverse watt

and U.V. relays and overload Emergency generator T/P circuit breaker fitted with rev. watt & U.V. relays and overload

and the switch and fuse gear (or circuit breakers) for each outgoing circuit T/P switch and fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule -- Instruments on main switchboard 8

ammeters 2 voltmeters 1 synchronising devices For compound machines in parallel are the ammeters and reverse current

protection devices connected on the pole opposite to the equaliser connection -- Earth Testing, state means provided Earth

lamps 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

make of fuses Hazemeyer & Weber are all fuses labelled yes If circuit breakers are provided for the generators, at what

overload do they operate 100 % instantaneous, 50 % with time delay, and at what current do the reverse current protective

devices operate 10 % F.L. 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 under 6% volts Are all paper insulated and varnished cambric insulated cables 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 they adequately protected -- State

type of cables (if in conduit this should also be stated) in machinery spaces silicone asbestos, galleys silicone asbestos

and laundries silicone asbestos State how the cables are supported or protected

Machinery spaces: clipped to steel tray or steelwork

Accommodation: clipped to asbestos

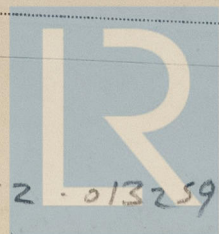
Are all lead sheaths, armouring and conduits effectually bonded and earthed -- Are all cables passing through decks and watertight

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 --

Have refrigeration fan motors been constructed under survey -- and test certificates supplied --

Are the motors accessible for maintenance at all times --



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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 2, 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* _____

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 Kelvin Hughes location of transmitter and receiver Fr. spaces 51-52

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	KVA per Generator	RATED AT			PRIME MOVER	
				Volts	Ampères	Revs. per Min.	TYPE	MAKER
MAIN ...	2	Hans Still	295	440	390	1200	6 YHXX	Davey-Paxman.
EMERGENCY ...	1	Stamford	29.6	440	39.2	1200	U2L	Austro
ROTARY TRANSFORMER								

GENERATOR CABLES

DESCRIPTION	No. of — <u>KVA</u>	CONDUCTORS		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (feet) <u>100</u> (meters)	INSULATION	PROTECTIVE COVERING
		No. in Parallel per Pole	Sectional Area or No. and Dia. of Strands <u>6</u> in. or less mm.	In the Circuit	Rule			
MAIN GENERATOR	2 <u>298</u>	1	120 <u>✓</u>	390	395	10 <u>M</u>	Asbestos	Silicone
" " EQUALISEE								
...								
...								
...								
EMERGENCY GENERATOR	1 <u>29.6</u>	1	6	39.2 <u>✓</u>	60	5	"	"
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.)

[illegible]

DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.)	
	CONDUCTORS
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
35	36
37	38
39	40
41	42
43	44
45	46
47	48
49	50
51	52
53	54
55	56
57	58
59	60
61	62
63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

DESCRIPTION			CONDUCTORS		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (Feet) (मी. लंबाई)	INSULATION	PROTECTIVE COVERING
		No. in Parallel per Pole	Sectional Area or No. and Dia. of Strands वृत्त-प्रकार का तार, मम.	In the Circuit	Rule	M			
<u>From Main switchboard to:</u>									
Lighting Engine store	L1	1	2	13 ✓	15	9	Asbestos	Silicone	
"	L2	1	2	13 ✓	15	9	"	"	
Power Engine room	1P	1	6	44 ✓	60	9	"	"	
" " "	2P	1	3.5	19 ✓	30	17	"	"	
" " "	3P	1	3.5	20 ✓	30	15	"	"	
" Vent. holds	4P	1	3.5	18 ✓	30	9	"	"	
" " accomm.	1V	1	2	12 ✓	15	13	"	"	
" domestic service	2V	1	6	40 ✓	60	12	"	"	
" anchor winches room	3D	1	22	128 ✓	135	15	"	"	
	1W	1	40	195 ✓	202	44	"	"	
<u>From lighting box L1 to:</u>									
Lighting aftship	1L	1	3.5	8.5 ✓	30	30	"	"	
" midship	2L	1	3.5	11 ✓	30	5	"	"	
" navigation		1	3.5	2 ✓	30	21	"	"	
<u>From Lighting box L2 to:</u>									
Lighting midship	3L	1	3.5	5.5 ✓	30	13	"	"	
" foreship	4L	1	3.5	6.3 ✓	30	46	"	"	
" engine room	5L	1	3.5	3.5 ✓	30	14	"	"	
<u>From Emergency board to:</u>									
Lighting navigation and nautical		1	3.5	5.5 ✓	30	28	"	"	
<u>From 3D to:</u>									
Power domestic service	1D	1	6	37 ✓	60	24	"	"	
" " "	2D	1	3.5	28 ✓	30	52	"	"	
" " "	4D	1	2	14 ✓	15	27	"	"	

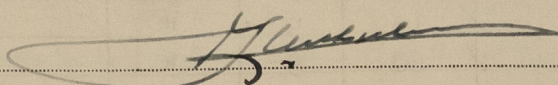
MOTOR CABLES

ALL IMPORTANT MOTORS TO BE ENUMERATED		No.	B.H.P.	MOTOR CABLES					
<u>From Main switchboard</u>									
Capstan	1	28	1	6	36	60	50	asbestos	silicone
Steering gear	2	10	1	2	14	15	52	"	"
Fan Engine room P.S.	1	2.5	1	2	3.5	15	20	"	"
Fan Engine room Stbd.	1	2.5	1	2	3.5	15	19	"	"
Fan Engine room fore	1	2.5	1	2	3.5	15	15	"	"
Gyro compass	1	0.5	1	2	0.9	15	20	"	"
Crane aft	1	34	1	6	42	60	16	"	"
Deck washpump	2	36	1	6	48	60	23	"	"
From 1P S.B.									
L.O. pump	1	4	1	2	6	15	9	"	"
Bilge pump	1	13.5	1	3.5	17	30	12	"	"
Ammolift aft	1	0.75	1	2	1.2	15	25	"	"
Air compressor	1	9	1	2	13	15	8	"	"
F.O. trim pump	1	4	1	2	6	15	10	"	"
F.O. purifier	1	2	1	1	3	6	9	"	"
L.O. purifier	1	2	1	1	3	6	8	"	"
From 2P P.S.									
Sludge pump	1	0.75	1	1	1.1	6	7	"	"
Compressor Refr.	2	4	1	2	6	15	24	"	"
Coolingw. pump	1	1.5	1	1	2.5	6	24	"	"
Freshwater hydrophore	1	1.5	1	1	2.5	6	11	"	"
Freshwater extract.pump	1	2	1	1	3	6	10	"	"
Saltwater extract.pump	1	2	1	1	3	6	10	"	"
From 3P P.S.									
Hotwater circ. pump	1	0.75	1	1	1.1	6	15	"	"
Vacuum pump	1	2	1	1	3	6	7	"	"
Freshwater trim pump	1	13.5	1	3.5	18	30	12	"	"
From 4P S.B.									
Boilermaker	1	1	1	1	1.5	6	9	"	"
Coolingw. pump	1	1.5	1	1	2.5	6	14	"	"
Grinder	1	0.2	1	1	0.5	6	8	"	"
Saltw. hydrophore	1	1.5	1	1	2.5	6	6	"	"
Grinding machine	1	0.5	1	1	0.8	6	7	"	"
From 1W									
Anchor winch	2	50	1	8	76	80	9	"	"
Deck crane fore	1	34	1	6	42	60	21	"	"
Ammolift fore	1	0.75	1	2	1.2	15	15	"	"

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient

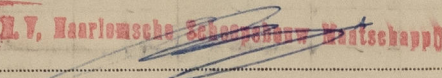
NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.

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.

 Electrical Contractors. Date 17/4-'59

COMPASSES

Have the compasses been adjusted under working conditions. yes

 Builder's Signature. Date 16/4-'59

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. Secr. letter 21.3.58;

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith. yes 30.12.57; 6.10.58; 26.9.58

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 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.

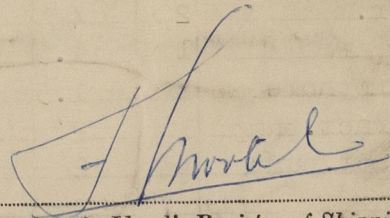
Total Capacity of Generators. 619.6 KVA Kilowatts.

The amount of Fee ... f.: 1463.-

When applied for, 15/5/1959

When received, 19.

Travelling Expenses (if any) £ : 600.-


Surveyor to Lloyd's Register of Shipping

Committee's Minute FRIDAY 19 JUN 1959

Assigned See Rpt. 1