

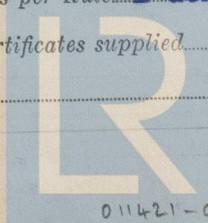
REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 6th July 56 When handed in at Local Office 17.7 56 Port of BILBAONo. in Survey held at Santander Date, First Survey 11.11-55 Last Survey 11th June 56
Reg. Book. N.E.No.9 (No. of Visits 8)35565 on the M/V. "SAN FLORO" Tons { Gross 644
Net 250Built at Santander By whom built Corcho Hijos S.A. Yard No. 62 When built 1956Owners José Manuel Pombo Port belonging to SantanderInstallation fitted by Corcho Hijos S.A. When fitted 1956Is vessel equipped for carrying Petroleum in bulk No Is vessel equipped with D.F. No E.S.D. No Gy.C. No Sub.Sig. No Radar NoPlans, have they been submitted and approved Yes System of Distribution 2 wires Voltage of Lighting 220Heating 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 YesAre the generators arranged to run in parallel Yes (2) Generators Is the compound winding connected to the negative or positive pole negativeHave machines 100 kw. and over been inspected by the Surveyors during manufacture and testing - Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule tested Position of Generators Engine roomEngine port & 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 Engine room forward
above platform.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 Slate, 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 YesIs the construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear for each generator and arrangement of equaliser switches Double pole circuit breakers with overload and reverse current trips and single pole equalizer switch interlocked.and the switch and fuse gear (or circuit breakers) for each outgoing circuit Ordinary double pole linked switches and fuses in each poleAre compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 4 ammeters 4 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided lampsPreference Tripping, state if provided No, and tested -Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yesmake of fuses A.E.E.S.A., are all fuses labelled Yes If circuit breakers are provided for the generators, at whatoverload do they operate 50%, and at what current do the reverse current protectivedevices operate 12% 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 pointunder maximum load 2 volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends None

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 - Statetype of cables (if in conduit this should also be stated) in machinery spaces V.R.L.C&Met. braided galleys V.R.L.C. & Met. braidedand laundries None State how the cables are supported or protected Clipped as per Rules to steelplates, bulkhead and deck head.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, lead bushes Refrigerated chambers, are the cables and fittings as per Rule 1 domestic chamberHave refrigeration fan motors been constructed under survey None and test certificates supplied -Are the motors accessible for maintenance at all times Yes

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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 None

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, fitted and adequately ventilated as per Rule Yes, state battery capacity in ampere hours 2-24 V. 190 A/h. 1-32 V. 130 A/h. Where required to do so does it comply with 1948 International Convention Yes

Lighting, is fluorescent lighting fitted No. If so, state nominal lamp voltage - and compartments where lamps are fitted -

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture weather proof Yes

Cargo Searchlights, No. of 2-200W, 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 No -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

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 pump 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 - 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.	
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.
MAIN	2	Const. Elec. Mec. Abril	65	220	295	1300	Oil Eng. General Motor Corporation
	1	Mawdsley's Ltd.	30	225	133	1100	M.E. M.A.K. Kiel
	1	Const. Electromec. Szekely	7	220	318	1200	Oil Eng. Motores Diesel Atos SA.
EMERGENCY ROTARY TRANSFORMER							

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	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	2	65	1	485	295	441	22	V.R.	L.C. & Met. braided
" EQUALISER	1		1	258	148	289	11	"	" " " "
	1	30	1	129	133	184	32	"	" " " "
	1	7	1	25.8	31.8	64	28	"	" " " "
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
" GENERATOR									

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No. of	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.
From main switchboard to galley board	1	65.81	70.7	119	48	V.R.	L.C. & Met. braided
" galley switch. to Works switchb.	1	9.35	11	37	8	"	" " " "
" main switchboard to hold & eng. room ventilators & accommodation heaters switchboard	1	65.81	106	119	10	"	" " " "

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

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.			
From main switchboard:							
To Box "A"	1	6.65	11.5	30.4	56	V.R.	L.C. & Met. braided
To Box "B"	1	6.65	8.5	30.4	48	"	" " " "
To Box "C"	1	6.65	9.5	30.4	42	"	" " " "
To Box "D"	1	6.65	4.4	30.4	120	"	" " " "
To Box "E"	1	6.65	8.8	30.4	15	"	" " " "
Navigation lights box	1	6.65	1.4	30.4	52	"	" " " "
From Box A to Navigation light box	1	6.65	1.4	30.4	6	"	" " " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	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.
Windlass	1	16	25.8	63	64	130	V.R.	L.C. & Met. Braided
Steering gear	1	2.5	4.45	8	24	54	"	" " " "
Capstan	1	16	25.8	63	64	54	"	" " " "
Cargo winches	4	16	25.8	63	64	65	"	" " " "
Hold ventilators	4	3.5	6.65	13	30.4	60	"	" " " "
Eng. " "	2	1.5	6.65	7	30.4	32	"	" " " "
Wireless	1		14.07	10	45.5	48	"	" " " "
Ballast pump	1	3	4.45	13	24	12	"	" " " "
Bilge pump	1	7.4	9.35	30	37	14	"	" " " "
Lubricating pump	1	6	9.35	23	37	23	"	" " " "
No. 1 O.F. Transfer Pump	1	0.75	4.45	2.9	24	19	"	" " " "
No. 2 O.F. " "	1	2	4.45	8.2	24	21	"	" " " "
No. 1 F.W. cooling pumps	1	5	9.35	19.3	37	32	"	" " " "
No. 2 F.W. " "	1	12	14.07	47	45.5	36	"	" " " "
Sanitary F.W. pump	1	1.5	4.45	7	24	34	"	" " " "
Refrigerating machine	1	2	4.45	8	24	42	"	" " " "
O.F. purifiers	1	2	9.35	8	37	8	"	" " " "
Lub. oil purifier	1	1	6.65	4	30.4	10	"	" " " "

NOTE.—Use Rpt. 43 Continuation Sheet if the above space is insufficient.

21 JUL 1956

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

COMPASSES.

Have the compasses been adjusted under the following conditions

CORCINO HIOSO S.A.
DIRECTOR-GERENTE
Alvaroa
ALVARO MAQUEDA

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 -

Plans. Are approved plans forwarded herewith Yes If not, state date of approval 19.5.55

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

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.) The electric installation has been fitted under Special Survey in accordance with the Society's Rules, approved plans or equivalent and Secretary's letter dated 19.5.55.

The material and workmanship are good.

On completion all tests required by the Rules have been carried out with satisfactory results.

This installation in my opinion is entitled to be classed in this Society.

Enclosures:-

Installation approved plans.
Testing certificate available in this office. Some of electric motors for essential service are second hand motors supplied by the Owners and manufactured in England and U.S.A. but they have been tested under full load working condition abroad and temperatures found in order.

Total Capacity of Generators 167 Kilowatts.

The amount of Fee ... 2000 Ptas. 12539
When applied for, 17-7-56
When received, 19
Travelling Expenses (if any) £ 2000

Francisco
Surveyor to Lloyd's Register of Shipping.

FRIDAY 7 SEP 1956

Committee's Minute

Assigned See Rpt. 46.

3m.12.51. Transfer. (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

