

RECEIVED

10 DEC 1951

Rpt. 13.

No. 77865

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

5- DEC 1951

Received at London Office

Date of writing Report 5th Nov. 1951 When handed in at Local Office 27. 11. 1951 Port of GLASGOW
No. in Survey held at Glasgow Date, First Survey 4th July, 1951 Last Survey 14th October, 1951
Reg. Book. (No. of Visits 8)
35216 on the "CIUDAD DE BARQUISIMETO" Tons { Gross 4219
Net
Built at Govan By whom built The Fairfield S. & E. Co. Yard No. 753 When built 1951
Owners Flota Mercante Grancolumbiana S.A. Port belonging to Barranquilla
Installation fitted by The Fairfield S. & E. Co. Ltd. When fitted 1951
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. — Radar Yes

Plans, have they been submitted and approved Yes System of Distribution Three wire Voltage of Lighting 115
Heating 230 Power 230 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
Negative 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 In Engine Room
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 On special platform
at the aft end of Engine Room
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" switchboard, 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 Five pole circuit breakers; two contacts arranged as
equaliser switches, one per pole; one contact for "Neutral". Fitted with overload,
reversed current and preference releases.
and the switch and fuse gear (or circuit breakers) for each outgoing circuit Either double pole circuit breaker with
overload release or double pole switch & fuses. Non-essential circuits controlled by
double pole circuit breaker with overload & preference releases.
Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboards 6
ammeters 4 voltmeters — synchronising devices. 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 —
Ammeter connected to shunt in earthed neutral
Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes,
make of fuses "Artex", are all fuses labelled Yes If circuit breakers are provided for the generators, at what
overload do they operate 50%, and at what current do the reversed current protective devices operate 15% F/L
Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule Yes
Cables, are they insulated and protected as per Rule no, if otherwise than as per Rule are they of an Approved Type Yes { See London
letter of 1.1.51.
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 Yes, if so, are they
adequately protected Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit —
or of the "H.R." type — State how the cables are supported or protected —
Main Cables: Lead covered wire braided cables clipped to steel tray or structure
Machinery Spaces: " " " " " " " " " "
Accommodation: Wire braided cables clipped to structure
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 Yes

Lloyd's Register
Foundation

010805-010815-0161 1/2

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. Yes... Emergency Supply, state position Emergency generator & Switchboard in special compartment, Bridge deck.
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 —... are they adequately ventilated —...
state battery capacity in ampere hours —...
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 —...
if so, how are they protected —...
and where are the controlling switches fitted —... Are all fittings suitably ventilated Yes...
Searchlight Lamps, 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 Yes... 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...
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 Submarine Signals... location of transmitter Yes 122/123... and receiver Yes 123/124...
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	W. H. Allen	340	240/120	1420	600	I.C. Diesel	National Gas & O.E.
EMERGENCY ...	1	Donkron Parkinson	25	240	104	1000	I.C. Diesel	Russell Newberry.
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.	Rule.			
MAIN GENERATOR ...	340	2	91/103	1420	1564	200	V.C.	L.S. Wire braid.
" " EQUALISER ...	"	1	91/103	—	782	100	"	" " "
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR ...								
" " GENERATOR...								

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

DESCRIPTION.								
Aux. Switchboards	A & B	1	61/093	354	492	690	V.C.	L.S. Wire braid.
	C	1	37/083	285	314	210	"	" " "
	D & E	1	37/103	354	408	345	"	" " "
	F	1	61/103	530	572	195	"	" " "
	G (Heating)	1	91/103	685	782	225	"	" " "
Laundry Equipment (etc.)	G (Galley)	1	37/103	397	408	225	"	" " "
		1	19/052	36	110	99	"	" " "
Ventilation	Cargo	1	19/044	55	92	60	"	" " "
	Machinery	1	7/0	51	92	60	V.C.	" " "
Accommodation		1	7/064	35	46	75	VIR	" " "
		1	19/052	30	110	300	V.C.	" " "
Navigation, etc.		1	91/103	500	782	60	"	" " "
Shore Connection		1	91/103	500	782	60	"	" " "

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	19/044	20	92	90	V.C.	L.S. Wire braided.
Radar	1	19/044	25	92	120	"	" " "
Navigation	1	7/044	8	31	240	V.I.R.	" " "
Lighting	1	19/044	68	92	99	V.C.	" " "
Eng. Rm. Refrig. machinery	1	19/083	108	202	261	"	" " "
Officers' Accommodation	1	19/064	85	143	141	"	" " "
Crew.	1	19/064	54	143	459	"	" " "
" " aft.	1	19/064	53	143	471	"	" " "
Cargo fwd.	1	19/052	28	110	240	"	" " "
" aft.	1	7/044	20	31	216	VIR.	" " "
Lucy: Officers' mess mid. aft.	1	7/044	16	31	240	"	" " "
Boat lights	1	7/044	15	37	168	"	" " "
E.R. & Refrig.	1	7/052	30	92	300	V.C.	" " "
Gyro Compass	1	19/044	70	110	255	"	" " "
Calorifiers	1	19/052	70	110	90	"	" " "
Middships	1	19/083	131	202	99	"	" " "
Heaters	1	19/083	126	202	129	"	" " "
Nas. Bridge & Boat decks	1	19/044	66	92	72	"	" " "
Boat deck aft accomm.	1	19/064	92	143	129	"	" " "
" " fwd. "	1	19/064	111	143	72	"	" " "
Shelter dk. fwd. "	1	19/083	163	202	450	"	" " "
" " mid. "	1	19/064	130	143	120	"	" " "
Shelter chain dks. aft.	1	19/083	157	202	105	"	" " "
Oil Heater 30 kds.	1	19/083	157	202	264	"	" " "
" " 36 "	1	7/036	15	24	80	"	" " "
Water " " "	1						
Automatic Boiler Blower	1						

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Steering Gear	2	16	1	19/052	61	110	396	V.C.
Handless	1	55	1	37/072	210	277	60	"
O.F. Transfer Pumps	2	13	1	19/044	49	92	120	"
Bilge Pumps	1	14.5	1	19/044	56	92	78	"
Sub. Oil Pumps	2	17	1	19/044	66	92	90	"
Ballast Pump	1	22	1	19/044	83	92	90	"
G.S. Pumps	1	26	1	19/052	98	110	90	"
S.W. Circ. Pumps	2	32	1	19/064	118	143	240	"
A.W. " "	2	39	1	19/083	145	202	264	"
Air Compressors	2	60	1	37/072	215	260	60	"
Running Pumps	1	2	1	7/029	8.7	15	70	V.I.R.
Fuel Valve Cooling pumps	2	1.5	1	3/036	6.6	10	60	"
Aux. S.W. circ. pumps	2	7	1	7/052	28	37	80	"
Refrigeration: Compressors	3	28	1	19/064	106	143	99	V.C.
Boys' Pumps	3	4	1	7/036	16	24	69	V.I.R.
Yams	4	5.5	1	7/036	21	24	140	"
S.W. Circ. Pump	2	3	1	7/036	13	24	108	"
Capstan	1	55	1	37/072	210	277	264	V.C.
Cargo Winches	16	43	1	19/083	177	238	60/153	"
O.F. Service Pumps	2	1.5	1	7/029	7	15	140	V.I.R.
Oil Winches	3	3.5	1	7/036	14	24	60	"

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.



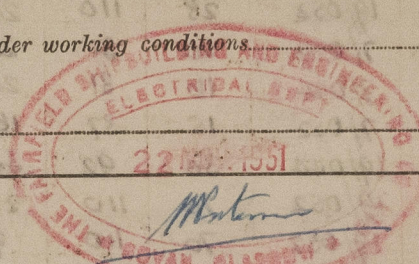
Electrical Contractors.

Date

COMPASSES.

Have the compasses been adjusted under 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.

Yes

If so, state name of vessel.

CIUDAD DE MEDDELIN

Plans. Are approved plans forwarded herewith.

No

If not, state date of approval.

29. 11. 50.

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

Yes

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, tried under full working conditions, and found satisfactory. Materials and workmanship are good.

Noted ADM 17.12.51

Total Capacity of Generators 1,045 Kilowatts.

The amount of Fee ...

Gls. 107 8 }
£ 26 17 }

When applied for,
Nov. 5. 1951

Travelling Expenses (if any) £ 2 : 6 : 3

When received,
19.

Surveyor to Lloyd's Register of Shipping.

B. Gaffner

Committee's Minute

Assigned See Gls. F.E. Machig Report No 77865