

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office. 17 NOV 1939

Date of writing Report. 23/10/1939 When handed in at Local Office. 7.11.39 Port of TRIESTE

No. in Survey held at TRIESTE Date, First Survey Aug 4 Last Survey Oct 18 1939
(Number of Visits. 11)

Reg. Book. 23390 on the M/S. "DOÑA AURORA"

Built at TRIESTE By whom built CANT. RIVINATI DELL'ADR. Yard No. 1226. When built 1939.
Tons { Gross 5011 Net 2977

Owners THE DE LA RAMA STEAMSHIP Port belonging to ILOILO. P.I.

Electrical Installation fitted by CANTIERI RIVINATI DELL'ADRIATICO Contract No. — When fitted 1939.

Is vessel fitted for carrying Petroleum in bulk. No Is vessel equipped with D.F. YES E.S.D. YES Gy.C. No Sub.Sig. No

Have plans been submitted and approved. YES System of Distribution TWO WIRE Voltage of supply for Lighting 220

Heating. — Power 220 Direct — Alternating Current, Lighting DIRECT Power DIRECT If Alternating Current state frequency. — Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off. YES Are turbine emergency governors fitted with a

trip switch as per Rule. — Generators, are they compound wound. YES, are they level compounded under working conditions. YES,

if not compound wound state distance between generators. — and from switchboard. — Where more than one generator is fitted are they

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. — Have certificates of

test for machines under 100 kw. been supplied. YES, and the results found as per rule. YES. Are the lubricating arrangements and the construction

of the generators as per rule. YES. Position of Generators IN ENGINE R. PORT SIDE.

—, is the ventilation in way of generators satisfactory. YES, are they clear of inflammable material. YES, if situated

near unprotected combustible material state distance from same horizontally. — and vertically. —, are the generators protected from mechanical

injury and damage from water, steam and oil. YES, are the bedplates and frames earthed. YES, and the prime movers and generators in metallic

contact. YES. Switchboards, where are main switchboards placed. IN ENGINE R. PORT SIDE

FORWARD BULKHEAD.

are they in accessible positions, free from inflammable gases and acid fumes. YES, are they protected from mechanical injury and damage from water, steam

and oil. YES, if situated near unprotected combustible material state distance from same horizontally. — and vertically. —, what insulation

material is used for the panels. STEEL PLATE WITH CONDUCTING PARTS INSULATED WITH MICA, if of synthetic insulating material is it an Approved Type. YES, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule. YES. Is the frame effectually earthed. YES

Is the construction as per Rule. YES, including accessibility of parts. YES, absence of fuses on the back of the board. YES, individual fuses

to pilot and earth lamps, voltmeters, etc. YES, locking of screws and nuts. YES, labelling of apparatus and fuses. YES, fuses on the "dead"

side of switches. YES. Description of Main Switchgear for each generator and arrangement of equaliser switches. DOUBLE POLE OVERLOAD

AUTOMATIC CIRCUIT BREAKER FOR GENERATORS WITH INTERLOCKED EQUALIZER

and for each outgoing circuit. DOUBLE POLE LINK SWITCH WITH OVERLOAD AUTOMATIC FOR LOAD

GRADE 300 AMP DOUBLE POLE LINK SWITCHER WITH FUSE TO EACH POLE FOR LOAD BELOW 300 AMP.

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

ammeters. 3 voltmeters. — synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection. YES. Earth Testing, state means provided. CONTACTS FOR VOLTMETER & GREEN & RED LAMPS.



Switches, Circuit Breakers and Fuses, are they as per Rule YES, are the fuses an approved type YES, are all fuses labelled as per Rule YES, are the reversed current protection devices connected on the pole opposite to the equaliser connection YES, have they been tested under working conditions YES. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule YES. Cables, are they insulated and protected as per the appropriate Tables of the Rules 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 6 VOLT, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets YES. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends — with insulating compound — or waterproof insulating tape —. 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 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 —. State how the cables are supported and protected STEEL PLATING AND CLIPS FOR LEAD COVERED & STEEL BRAIDED CABLES - IN WOOD CASING FOR LEAD COVERED CABLES IN ACCOMMODATION.

Are all lead sheaths, armouring and conduits effectually bonded and earthed YES. Refrigerated chambers, are the cables and fittings as per Rule 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 effectually bushed YES and with what material LEAD. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule YES. Emergency Supply, state position BOAT DECK and method of control DIESEL MOTOR.

Navigation Lamps, are they separately wired YES controlled by separate double pole switches YES 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. Secondary Batteries, are they constructed and fitted as per Rule NONE, are they adequately ventilated —. Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof YES. Are 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 YES, are all fittings and accessories constructed and installed as per Rule YES. Searchlight Lamps, No. of —, whether fixed or portable —, are their fittings as per Rule —. Heating and Cooking, is the general construction as per Rule —, are the frames effectually earthed —, are heaters in the accommodation of the convection type —. Motors, are all motors constructed and installed as per Rule YES and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil YES, if situated near unprotected combustible material state minimum distance from same horizontally — and vertically —. 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 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 the cartridge type —, are they of an approved type —. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type —. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule YES, are they suitably stored in dry situations YES. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory YES.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT			DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.		Fuel Used.	Flash Point of Fuel.
MAIN ...	3	75	220	340	480	DIESEL ENGINE	DIESEL OIL 123°C
EMERGENCY ...	1	15	220	68	1000	DIESEL ENGINE	DIESEL OIL 123°C
ROTARY TRANSFORMER							

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area or Nominal Diameter Sq. inches or mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	Nº1.	2	129	340	368	20	RUBBER	LEAD COVERED & STEEL BRAIDED.
" " EQUALISER ...		1	129			10	"	"
" " " Nº2.	75	2	129	340	368	20	"	"
" " " " 2x PAR 129+75						16	"	"
" " " Nº3.	75	2	129	340	368	40	"	"
" " " " 2.58		1	2.58			20	"	"
EMERGENCY GENERATOR ...	15	1	38.7	68	83	10	"	"
ROTARY TRANSFORMER: MOTOR ...								
" " GENERATOR ...								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.		
AUX. SWITCHBOARDS AND SECTION BOARDS								
SECTION B. WINCHES AFT Nº4.		1	258	400	450	130 RUBBER	LEAD COVERED & STEEL BRAIDED	
" " CENTRE Nº5.		1	258	400	450	100	"	"
" " FORWARD Nº6.		1	258	400	450	140	"	"
" " POWER ENG. R. Nº1.		1	129	140	184	50	"	"
" " WORKSHOP. Nº2.		1	9.35	26	37	30	"	"
" " REFRIGER. Nº3.		1	19.5	40	53	50	"	"
" " GALLEY HOT PRESS Nº7.		1	25.8	60	64	60	"	"
" " LAUNDRY Nº7A		1	9.7	140	172	180	"	"
FROM M.S.B. TO EMERGENCY S.B.		1	38.7	88	83	110	"	"

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.		
WIRELESS ...		1	4.5	12	24	80	RUBBER	LEAD COVERED & STEEL BRAIDED.
NAVIGATION LIGHTS ...		1	1.95	1	12	80	"	"
LIGHTING WIRELESS ENG. R. Nº4.		1	4.5	10	24	40	"	"
ACCOMMODATION Nº14		1	6.45	15	31	50	"	"
DECK & STORES FORE AFT.								
Nº12, 13, 16, 15		1	4.5	12	24	40	"	"
PASSENG. ACCOM. & PILOT R. 17-18		1	9.35	18	37	60	"	"
CARGO LIGHT Nº13-15-16.		1	4.5	16	24	40	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.	
WINCHES	12	25	1	48.5	96	97	20	RUBBER	LEAD COVERED & STEEL BRAIDED.
LAUNDRY WASHING MACH	1	0.5	1	1.95	2	12	20	"	"
" MANSAN	1	1	1	1.95	4	12	20	"	"
" PUMP	1	0.5	1	1.95	2	12	20	"	"
REF. ENG. COMPRESSOR	1	9.5	1	16	40	46	20	"	"
REF. CIRCUL. PUMP	1	0.75	1	1.95	3	12	20	"	"
M. SHOP. TURNING MACHINE	1	3	1	2.9	12	18	10	"	"
" DRILLER	1	1	1	1.95	4	12	15	"	"
" FILER	1	1.5	1	1.95	6	12	20	"	"
" MILL-STONE	1	1.1	1	1.95	4	12	15	"	"
ENG. TURNIN GEAR	1	15	1	25.8	60	64	30	"	"
OIL FUEL D.B. PUMP	1	0.5	1	1.95	2	12	30	"	"
OIL FUEL DEPUR. PUMP	1	2.5	1	1.95	10	12	20	"	"
" " "	1	2.5	1	1.95	10	12	16	"	"
LUB. OIL DEPUR. PUMP	1	2.5	1	1.95	10	12	20	"	"
FIRE & SAN. PUMP	1	15	1	25.8	60	64	18	"	"
F.W. PUMP	1	6.5	1	6.45	25	31	30	"	"
OIL FUEL TRANSFER P.	1	9	1	9.35	36	37	20	"	"
LUB OIL PUMPS.	2	30	1	47.5	120	130	40	"	"
M. CIRCUL. PUMPS	2	70	1	26.2	280	288	50	"	"
BALLAST. PUMP	1	21	1	48.5	84	87	40	"	"
VEGETABLE OIL PUMP	1	29	1	37.5	115	130	40	"	"
BILGE PUMP.	1	15	1	25.8	60	64	150	"	"
STEERING GEAR	1	7	1	19.4	40	53	50	"	"
LEONARD GEAR MOTOR	1	10	1	19.4	40	53	40	"	"
" GENERATOR	1	6.6	1	19.4	39	53	40	"	"
CAPTAIN AFT	1	25	1	48.5	96	97	110	"	"
WINDLASS	1	58	1	129	330	342	180	"	"

● INTERMITTENT WORKING (1/2 HOUR RATING.)

pt. 5b.

Date of writing

No. in Reg. Book **23390**

Built at

Engines made

Boilers made

Owners **TH**

VERTICAL

Made at **TA**

Manufacture

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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.
 Cantieri Riuniti Dell' Adriatico

CANTIERE SAN MARCO

Aug. J. Man

Electrical Engineers.

Date **25.8.39/XVII**

COMPASSES.

Minimum distance between electric generators or motors and standard compass **GENERATORS 30M^t MOTOR 6M^t**

Minimum distance between electric generators or motors and steering compass **" 32M^t " 5"**

The nearest cables to the compasses are as follows:—

A cable carrying **5** Ampères **4 M^t** feet from standard compass **3 M^t** feet from steering compass.
 A cable carrying **1** Ampères **4 "** feet from standard compass **3 "** feet from steering compass.
 A cable carrying **—** Ampères **—** feet from standard compass **—** feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power **YES**

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted **NO**

The maximum deviation due to electric currents was found to be **—** degrees on **—** course in the case of the

standard compass, and **—** degrees on **—** course in the case of the steering compass.

Cantieri Riuniti Dell' Adriatico
 CANTIERE SAN MARCO

Bauer

Builder's Signature.

Date **25.8.39/XVII**

Is this installation a duplicate of a previous case **NO** If so, state name of vessel **—**

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

This installation has been made in accordance of the Rules, approved plans and secretary letters. The material and workmanship are good. The installation has been tested on board complete under full working conditions and also tested for insulating conditions and found in order.

*Noted
 L.V.
 21/11/39*

Total Capacity of Generators **240.-** Kilowatts.

The amount of Fee ... **Lire 4116.-** When applied for, **30/10/39**

Travelling Expenses (if any) £ : : When received, **29/11/39**

Cor. of J. J. J. J. J.
 Surveyor to Lloyd's Register of Shipping

FRI. 24 NOV 1939

Committee's Minute **See Tri' J.C. 127/12**
 Assigned

(MADE IN ENGLAND.)
 2m.10.38.—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

