

Rpt. 13.

# REPORT ON ELECTRIC FITTINGS.

No. 9129

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 19 When handed in at Local Office 17. 3. 1931 Received at London Office 27 MAR 1931

No. in Survey held at Monfalcone Date, First Survey Jan 13 Last Survey Mar 10 1931  
Reg. Book.

89923 on the M/S Cortellazzo

(Number of Visits 1st)

Tons Gross 7023  
Net 4224

Built at Monfalcone By whom built Cantieri Riun. dell'Ad. Yard No. 223 When built 1931

Owners Soc. Venetiana di R. a V. Port belonging to Venice

Electric Light Installation fitted by Cantieri Riuniti dell'Adriatico Contract No. When fitted 1931

Is the Vessel fitted for carrying Petroleum in bulk no Monfalcone

System of Distribution Two wire

Pressure of supply for Lighting 110 volts, Heating — volts, Power 220 volts.

Direct or Alternating Current, Lighting Direct Power Direct

If alternating current system, state frequency of periods per second —

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off yes

Generators, do they comply with the requirements regarding rating yes, are they compound wound yes

are they over compounded 5 per cent. yes, if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel yes, is an adjustable regulating resistance fitted in

series with each shunt field yes

Are all terminals accessible, clearly marked, and furnished with sockets yes, are they so spaced or shielded that they cannot be accidentally earthed,

short circuited, or touched yes Are the lubricating arrangements of the generators as per Rule yes

Position of Generators In C. R. Port side

is the ventilation in way of the generators satisfactory yes, are they clear of all inflammable material yes

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

— and —, are the generators protected from mechanical injury and damage from water, steam or oil yes

are their axes of rotation fore and aft yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed yes are the prime movers and

their respective generators in metallic contact yes

Main Switch Boards, where placed near generators

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard —

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes yes

are they protected from mechanical injury and damage from water, steam or oil yes, if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards — and —

are they constructed wholly of durable, non-ignitable non-absorbent materials yes Plate &amp; steel, is all insulation of high dielectric strength and of

permanently high insulation resistance yes, if semi-insulating material is used, are all conducting parts insulated from the slab

with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework yes

and is the frame effectively earthed yes Are the fittings as per Rule regarding: — spacing or shielding of live parts

yes, accessibility of all parts yes, absence of fuses on back of board yes, proportion of omnibus

bars yes, individual fuses to voltmeter, pilot or earth lamp yes, connections of switches yes

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches For each generator &amp; Busbar

Transformer: A double pole circuit breaker with overload and overcurrent trip with interlocked equalizer

switch. For Wind DB: A double pole air breaker with overload and fuses to each pole. For Bus. Eng. DB: A single

pole circuit breaker with overload and fuses to each pole. For Heating Engine: A single pole circuit

breaker with fuses to each pole. Double pole air switches with fuses to each pole for all other out-

going circuit

Instruments on main switchboard 14 ammeters 6 voltmeters — synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system connections

to Voltmeter

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules yes

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule yes



Cables: Single, twin, concentric, or multicore single & twin are the cables insulated and protected as per Tables IV or V of the Rules yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets

yes

Paper Insulated Cables. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound none

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage yes

Support and Protection of Cables, state how the cables are supported and protected Armoured and lead covered cables supported by clips

If cables are run in wood casings, are the casings and caps secured by screws —, are the cap screws of brass —, are the cables run in separate grooves —. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements none

Joints in Cables, state if any, and how made, insulated, and protected only in small size of cables made in W.T. junction boxes

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands

yes

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed yes state the material of which the bushes are made hard wood

Earthing Connections, state what earthing connections are fitted and their respective sectional areas —

are their connections made as per Rule —

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule yes

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven none

Navigation Lamps, are these separately wired yes, controlled by separate switch and separate fuses yes, are the fuses double pole yes

are the switches and fuses grouped in a position accessible only to the officers on watch yes

has each navigation lamp an automatic indicator as per Rule yes

Secondary Batteries, are they constructed and fitted as per Rule none

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

are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected none

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected none

how are the cables led

where are the controlling switches situated

Searchlight Lamps, No. of —, whether fixed or portable —, are their fittings as per Rule —

Arc Lamps, other than searchlight lamps, No. of —, are their live parts insulated from the frame or case —, are their fittings as per Rule —

Motors, are their working parts readily accessible yes, are the coils self-contained and readily removable for replacement yes

are the brushes, brush holders, terminals and lubricating arrangements as per Rule yes, are the motors placed in well-ventilated compartments in which

inflammable gases cannot accumulate and clear of all inflammable material yes

are they protected from mechanical injury and damage from water, steam or oil yes are their axes of rotation fore and aft yes

if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type

totally enclosed not of this type, state distance of the combustible material horizontally or vertically above the motors — and —

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule steel marks

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes,

section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings —

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office —

## PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE	
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	3	90	220	410	270	Diesel Engine	Diesel oil	
AUXILIARY ...	1	32	220	146	425	Flat bulb motor	"	
EMERGENCY ...								
ROTARY TRANSFORMER	2	13kw/214V	110/220	120/88	1400	Electric Motor		

## GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.			COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.	Amperes.			
MAIN GENERATOR ...	2	161x2	37	2.35	410	214x2	60	60	rubber	Lead cov. & arm.
EQUALISER CONNECTIONS ...	1	161	37	2.35	—	214	—	—	"	"
AUXILIARY GENERATOR ...	1	97	37	1.85	146	152	90	90	"	"
Equaliser Connection	1	39	19	1.60	—	83	—	—	"	"
ROTARY TRANSFORMER MOTOR	1	51	19	1.85	88	102	15	15	"	"
TRANSFORMER GENERATOR	1	74	37	1.5	120	127	15	15	"	"
Equaliser Connection	1	39	19	1.6	—	83	—	—	"	"
ENGINE ROOM 220 V	1	4.5	7	0.9	17	24	75	75	"	"
Circuits in E.R.	1	1.3	3	0.75	3	8	130	130	"	"
4 AUXILIARY SWITCHES										

ACCOMMODATION OFFICERS ...	1	9.3	7	1.3	21	37	220	220	rubber	Lead cov. & arm.
Passengers	1	14	7	1.6	25	46	220	220	"	"
Crew	1	9.3	7	1.3	27	37	150	150	"	"
Deck	1	9.3	7	1.3	30	37	250	250	"	"
Navigation	1	4.5	7	0.9	7	24	300	300	"	"
WIRELESS ...	1	9.3	7	1.3	25	37	300	300	"	"
SEARCHLIGHT Plug ...	1	14	7	1.6	40	46	400	400	"	"
MASTHEAD LIGHT ...	1	1.3	1	1.3	0.5	8	250	250	"	"
SIDE LIGHTS ...	1	1.3	1	1.3	0.3	8	150	150	"	"
COMPASS LIGHTS ...	1	1.3	1	1.3	0.15	8	130	130	"	Lead covered
POOP LIGHTS ...	1	1.3	1	1.3	0.3	8	400	400	"	Lead cov. & arm.
CARGO LIGHTS ...	1	4.5	7	0.9	8	24	250	250	"	"
ARC LAMPS ...										
HEATERS ...										

## MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
		No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP S.B. II ...	1	1	39	19	1.6	65	83	20	rubber	Lead cov. & arm.
MAIN BILGE LINE PUMPS SBI	1	1	14.5	7	1.6	42	46	25	"	"
GENERAL SERVICE PUMPS SBI	1	1	14.5	7	1.6	42	46	30	"	"
EMERGENCY BILGE PUMP										
SANITARY PUMP SBI	1	1	4.5	7	0.9	18	24	30	"	"
CIRC. SEA WATER PUMPS SBI	1	1	39	19	1.6	69	83	25	"	"
Oil Fuel Purifier SBI	2	1	6.5	7	1.1	28	31	40	"	"
Lubric. Oil Purifier SBI	1	1	3	7	0.75	14	18	40	"	"
Air Compressor										
FRESH WATER PUMP SBI	1	1	3	7	0.75	12	18	50	"	"
ENGINE TURNING GEAR SBI	1	1	14.5	7	1.6	42	46	80	"	"
Lubric. Oil Purifier SBI	1	1	3	7	0.75	14	18	45	"	"
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS SBI	1	1	39	19	1.6	69	83	35	"	"
OIL FUEL TRANSFER PUMPS SBI	1	1	14.5	7	1.6	35	46	40	"	"
WINDLASS 1 h. rating	1	1	196	37	2.6	244	290	400	"	"
* WINCHES, FORWARD S.B. ...	6	1	395	91	2.35	646	632	100	"	"
From S.B. to Winches	1	1	74x51	37x19	1.5x1.85	127x98	127x102	300	"	"
* WINCHES, AFT S.B. ...	7	2	243x2	61	2.25	773	424x2	100	"	"
From S.B. to Winches	1	1	74x51	37x19	1.5x1.85	127x98	127x102	300	"	"
STEERING GEAR										
(a) MOTOR Pump	1	1	39	19	1.6	64	83	400	"	"
(b) MAIN MOTOR										
WORKSHOP MOTOR SBI	1	1	4.5	7	0.9	12	24	80	"	"
VENTILATING FANS										
SBI for Auxiliaries	6	1	77	37	1.6	140	130	50	"	"
SBI for Auxiliaries	7	2	97x2	37	1.85	300	152x2	70	"	"
SBI for Thermic Resistance	3	1	74	37	1.5	109	120	45	"	"
1st. Resistance	1	1	4.5	7	0.9	16	24	45	"	"
2nd. Resistance	1	1	14.5	7	1.6	36	46	45	"	"
3rd. Resistance	1	1	39	19	1.6	57	83	45	"	"
* 1/2 h. rating										
** See London Letter 5-6-30										

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All Conductors are of annealed copper conforming to British Standard Specification No. 7.  
The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description. **Cantieri Riuniti Dell' Adriatico**  
**CANTIERE MONFALCONE**

*ing. Fed. Artinoli* Electrical Engineers.

Date

#### COMPASSES.

Distance between electric generators or motors and standard compass *160'*

Distance between electric generators or motors and steering compass *150'*

The nearest cables to the compasses are as follows:—

A cable carrying *7* Ampères *25* feet from standard compass *20* feet from steering compass.

A cable carrying *0.2* Ampères *in the* feet from standard compass *in the* feet from steering compass.

A cable carrying 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 *yes*

The maximum deviation due to electric currents was found to be *none* 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 MONFALCONE**

*ing. Fed. Artinoli* Builder's Signature.

Date

Is this installation a duplicate of a previous case *yes* If so, state name of vessel *M/S Barbarigo & Bermania*

General Remarks (State quality of workmanship, opinions as to class, &c.)

*This electric installation has been made in accordance with the Rule, the material and workmanship are good. The whole installation was examined under working condition and the insulating resistance tested and found satisfactory.*

It is submitted that  
this vessel is eligible for  
THE RECORD.

*Elec. Light*

*RM 28/3/31*

DUAL CLASS

**L.R. & R.I.**

Total Capacity of Generators *302* Kilowatts.

The amount of Fee ...

*L. 36.32*

When applied for,

*18/3/31*

Travelling Expenses (if any) £

When received,

*9.4.31*

Committee's Minute

Assigned

*Elec Lt.*



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