

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 19 1938 When handed in at Local Office 17/6/38 Port of TRIESTE

No. in Survey held at Monfalcone Date, First Survey 14rd 8th Last Survey May 30th 1938

Reg. Book. 39579 on the m/v Amala Tons { Gross 6256 Net 3594

Built at Monfalcone By whom built laut. Rium. dell'adr. Yard No. 1202 When built 1938

Owners N.V. "La Corona" Port belonging to Gravenhage

Electric Light Installation fitted by Officine Elettromeccaniche Contract No. - When fitted 1938

Is the Vessel fitted for carrying Petroleum in bulk yes

System of Distribution 2 wires Pressure of supply for Lighting 110 volts, Heating - volts, Power 110 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 no, 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

Position of Generators In Engine room port side, 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 (Asbestos lamp.), 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 -

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 Double pole change over with switches for generators and for all outgoing circuits with fuse to each pole

Instruments on main switchboard 2 ammeters 2 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 Lamps

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 2 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 *3 rocks*

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 *Lead covered or lead covered and steel braided. In tubes on decks and dangerous spaces*

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 *yes*

Joints in Cables, state if any, and how made, insulated, and protected *gas tight 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 *lead*

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 *yes*

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 *tubes*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *gas tight lamps with cables in gas tight tubing*, how are the cables led

where are the controlling switches situated *outside of spaces*

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

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 *drip proof*, if 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 *yes*

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 *yes*

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

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	16x2	110	145	390	One by Steam Eng One by H. from H. Eng	Heavy Oil	above 150° F.
AUXILIARY								
EMERGENCY	1	16	110	145	390	16 or 20 w. set fitted 347 at deck in lieu of the (Buston + Hornby, fitted)		
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT, AMPERES.		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.			
12 MAIN GENERATOR	1	95	37	1.82	145	150	120	rubber	Lead covered steel braided.
3 SHORE CONNECTIONS	1	95	37	1.82	145	150		"	"
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER GENERATOR									
ENGINE ROOM to Aux. S.B.	1	10	7	1.4	40	37	120	rubber	Lead covered steel braided.
4 BOILER ROOM to B	1	10	7	1.4	40	37	120	rubber	Lead covered steel braided.
AUXILIARY SWITCHBOARDS									
4 From B to B1,2,3,4,5,6	1	2.5	1	1.8	Maxim. 11	18	170 Max.	"	"
5 To Aux. Board C	1	1.6	7	1.7	25	49	125	"	"
From C to C1,2,3,4,5	1	2.5	1	1.8	Maxim. 6	18	180 Max.	"	"
6 To Aux. Board D	1	3.5	19	1.5	42	76	460	"	" (in tube)
From D to D1,2,3,4	1	2.5	1	1.8	6	18	24 Max.	"	"
From D to D1,2,3,4	1	10	7	1.4	22	37	50	"	"
7 Navigation Board G	1	10	7	1.4	6	37	460	"	"
From G to H	1	10	7	1.4	2	37	70	"	"
10 To Aux. Boards A1, A2	1	16	7	1.7	9	49	750	"	"
11 To Aux. Board S	1	10	7	1.4	17	37	80	"	"
8 WIRELESS	1	2.5	19	1.3	30	64	786	"	"
9 SEARCHLIGHT	1	7.0	37	1.6	80	123	846	"	"
MASTHEAD LIGHT	1	1.5	1	1.4	0.5	7			
SIDE LIGHTS	1	1.5	1	1.4	0.3	7			
COMPASS LIGHTS	1	1.5	1	1.4	0.15	7			
POOP LIGHTS	1	1.5	1	1.4	0.3	7			
CARGO LIGHTS									
ARC LAMPS									
11 From S to S1,2,3,4	1	10	7	1.4	Maxim. 7.3	37	600 Max.	"	"

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT, AMPERES.		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										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
14 ENGINE TURNING GEAR	1		70	37	1.6	100	123	95	rubber	Lead covered steel braided.
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
12 WORKSHOP MOTOR S.B-E	6	1	50	19	1.85	86	98	230	"	"
VENTILATING FANS										
13 Telephone Chrg. Board	1	1.5	1	1.4	3	8	138	"	"	

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
 Officine Elettroniche

Am. Rossi di Genova

Electrical Engineers. Date 14 VI 38
 /XVI

COMPASSES.

Distance between electric generators or motors and standard compass } 250'
 Distance between electric generators or motors and steering compass }

The nearest cables to the compasses are as follows:—

A cable carrying 20 Ampères 16 feet from standard compass 14 feet from steering compass.

A cable carrying 2 Ampères 6 feet from standard compass 6 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 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

Am. Rossi di Genova

Builder's Signature. Date 14 VI 38
 /XVI

Is this installation a duplicate of a previous case no If so, state name of vessel M/S Solarium

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

This Electrical Equipment has been made in accordance with the Rules, approved plans and Secretary's orders. The material and workmanship are good. The insulation resistance has been measured in accordance with Section 17 of the Rules for Electrical Equipment and found in order.

*Noted
 J.Y.
 21/6/38.*

Total Capacity of Generators 32 Kilowatts.

The amount of Fee ... L. 2128 :

When applied for,	<u>13/6/1938</u>
When received,	<u>23-6-1938</u>

 Travelling Expenses (if any) £ : 24-6

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

Committee's Minute TUE 28 JUN 1938

Assigned See Tri. Rpt. 12109

Im. 1223.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)