

Rpt. 13.

No. 13965

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

20 APR 1954

Received at London Office

T R I E S T E

Date of writing Report 6th April 1954 When handed in at Local Office 10.4.54 Port of TRIESTE

No. in Survey held at TRIESTE Date, First Survey Last Survey 29th March 1954  
Reg. Book. (No. of Visits See Rpt.) 40

40464 on the Steam Tanker "MARE ADRIACUM" Tons Gross 20451 Net 12455

Built at TRIESTE By whom built Cantieri Riuniti dello Yard No. 1773 When built 1954 - 3  
Adriatico

Owners Fratelli d'Amico Armatori Port belonging to TRIESTE

Installation fitted by Cantieri Riuniti dell'Adriatico When fitted 1954

Is vessel equipped for carrying Petroleum in bulk yes 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 two wire insulated Voltage of Lighting 110

Heating 110 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 yes 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 eng. room Two turbo sets Stard. side aft (Starting platform level) Diesel set

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 In eng. room Port side

aft at starting platform level.

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 type, 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 three pole linked circuit breaker with overload current

releases and reverse current releases. Third pole used for equaliser

and the switch and fuse gear (or circuit breakers) for each outgoing circuit two pole linked circuit breaker with over

load current releases. Several circuits controlled from local sub-switchboards adjacent

to the motors concerned.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 20

ammeters 2 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

earth lamps and voltmeters with push buttons and selector switches.

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type yes

make of fuses FER Milan/C.B. Stotz are all fuses labelled yes If circuit breakers are provided for the generators, at what

overload do they operate tested &amp; set at 20% q/c and at what current do the reversed current protective devices operate 10% R/C

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule yes

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 point under maximum load 5 Volts, 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 part or run in conduit yes

or of the "HR" type - State how the cables are supported or protected supported and clipped as per Rules.

Lead covered and steel braided or spiral wire armoured in conduit as required.

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 domestic Refrigerated chambers, are the cables and fittings as per Rule yes

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes Emergency Supply, state position 24 Volt. 40 A/hr. Emergency lighting (Lights in Eng. & Blr. rooms & passageways) automatic.

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 yes, are they adequately ventilated yes

state battery capacity in ampere hours 40 A/hr. Emergency Lighting 80 A/hr. Alarms, telephones etc., 40 A/hr. R.T.

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 yes

if so, how are they protected approved flame proof lamps and fittings installed

and where are the controlling switches fitted to Rule requirements Are all fittings suitably ventilated yes

Searchlight Lamps, No. of 1, whether fixed or portable fixed, but removable (On bows for Suez Canal) 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 yes

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 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 yes, are all fuses of an Approved Cartridge Type yes make of fuse RER Milan Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships yes Are the cables lead covered as per Rule yes

E.S.D., if fitted state maker Marconi location of transmitter between frames 50-51 and receiver between frames 50-51

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 ...	2	C.R.D.A.	450	220	2045	800	St. turbine	Cantiere del Tirreno
	1	C.R.D.A.	100	220	454	500	Diesel Eng.	C.R.D.A.-F.M.S.A.
EMERGENCY ...								
ROTARY TRANSFORMER								

## GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in ft.	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area of Cable or Strands, Sq. mm.	In the Circuit.	Rule.			
2 MAIN GENERATOR ...	450	6	400	2045	2328	32/37	V.I.R.	Lead and steel braided
" " EQUALISER ...		3	400	1022	1164	16/17	do	do
1 Diesel Generator	100	2	200	454	498	13	do	do
" " Equaliser		1	200	227	249	7	do	do
EMERGENCY GENERATOR ...								
2 ROTARY TRANSFORMER: MOTOR	60 HP	1	200	220	249	15	do	do
2 " " GENERATOR	40 KWT	1	400	364	388	14	do	do

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

DESCRIPTION.								
PM1 Power Section Board Eng. Room	2	200	427	498	68	V.I.R.	Lead & Steel braided	
PM1A " " " " "	1	63	108	116	72	do	do	
PM2 " " " " "	2	200	338	498	50	do	do	
PM3 " " " " "	1	315	236	331	58	do	do	
PM4 " " " " "	1	160	105	212	19	do	do	
PM5 " " " " "	1	160	102	212	42	do	do	
SSC " " " Aft	2	200	347	498	50	do	do	
STV " " " Ventilation	1	125	146	176	96	do	do	
FO " " " Workshop	1	32	37	72	13	do	do	
FF " " " Refrigerators	1	63	103	116	56	do	do	
PT " " " Shore connection	2	160	400	424	64	do	do	

## LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in ft.	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area of Cable or Strands, Sq. mm.	In the Circuit.	Rule.			
110 Volts except as stated below.							
SLM1 Lighting Eng. Room	1	32	51	72	54	V.I.R.	Lead & steel braided
SLM2 " " "	1	50	71	97	52	do	do
SLC1 " Deck forward	3	100	171	474	252	do	do
SLC2 " " aft	1	200	175	249	54	do	do
QFN Navigation	2	4	1.8	42	276	do	do
SV Signals various	1	20	32	57	274	do	do
SV (220V.) Signals various	1	32	16	72	274	do	do
RT " Radio	1	63	30	116	288	do	do
P " Suez Searchlight	1	20	14	57	450	do	do

## MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
PGP1&2 Condenser circ. water	2	80	1	250	292	283	46/56	V.I.R. Lead & steel braided
PEG1&2 " extraction	2	30	1	63	115	116	54/60	do do
PCT1&2 Aux. Cond. circ. water	2	20	1	49	76.5	83	32	do do
PET1&2 " " extraction	2	8.5	1	10	34.3	37	34	do do
OL 1&2 Lub. oil pump	2	33	1	80	125	136	18	do do
PI Bilge pump	1	55	1	160	202	212	42	do do
VTG1&2 Boiler F.D. Fan	2	118	2	200	430	498	54/64	do do
TI & T2 Steering gear	2	40	1	100	150	158	104	do do
PPC Cargo extraction pump	1	93	1	315	338	331	84	do do
Engine room ventilation	2	10	1	16	40	48	68	do do
Engine room air extraction	2	5.5	1	6.3	24	30	102	do do
Boiler room ventilation	2	10	1	16	40	48	112	do do
Bilge & ballast pump	1	28	1	63	108	116	46	do do
O.F. transfer pump	1	26	1	63	100	116	58	do do
O.F. service pump	2	10	1	16	40	48	52	do do

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

Electrical Contractors.

Date 9<sup>th</sup> April 1954

COMPASSES.

Have the compasses been adjusted under working conditions.

Yes.

CANTIERI RIUNITI DELL'ADRIATICO

Builder's Signature.

Date 9<sup>th</sup> April 1954

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.

No. Retained for

plans.

If not, state date of approval.

26.11.53

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 has been installed under special survey in accordance with the approved plans, the Secretary's letters and Rule requirements.

The workmanship and materials are good.

On completion the installation was tried under full working conditions and the insulation resistance tested, all with satisfactory results.

In my opinion the installation is eligible for full classification

Total Capacity of Generators 1,000 V Kilowatts.

less 10% Lit 387.600.

The amount of Fee ... £ 19,300

Per land

When applied for, 10.4 1954

When received, 19

Travelling Expenses (if any) £ 19,300

Rev Tax 3% 12,786.

Committee's Minute FRIDAY 28 MAY 1954

Assigned See Rpt 4.

DUAL CLASS  
L.R. & R.I.

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



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Foundation