

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 26 6 1953 When handed in at Local Office 3 7 1953 Port of TRIESTE Received at London Office 19 JUL 1953

No. in Reg. Book. 91629 Survey held at TRIESTE Date, First Survey See Rpt. 46 Last Survey 17th JUNE 1953 (No. of Visits —)

on the Motor Vessel "EL NIL" Tons { Gross 2737 Net 1489

Built at Trieste By whom built Cant. Riuniti dell'Adriatico Yard No. 1779 When built 1953

Owners Alexandria Navigation Co., S.A.E. Port belonging to Alexandria

Installation fitted by Cantieri Riuniti dell'Adriatico When fitted 1953

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. no Radar yes

Plans, have they been submitted and approved yes System of Distribution two wire insulated Voltage of Lighting 220

Heating 220 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 ✓ Generators, are they compound wound yes, and level compounded under working conditions yes

Are the generators arranged to run in parallel yes Is the compound winding connected to the negative or positive pole negative

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing yes Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule yes Position of Generators 3 positioned Port side Main

E.R. One 136.5 KW aft outboard One 84 KW aft inboard One 84 KW forwd. inboard

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 Main: Port side Main Eng. room on bottom platform. Emergency: Main Eng. room stard. forward at Main deck 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 C.B. with overload current releases and reverse current release. Also preference relays on selected branch circuit breakers. Third pole used for equaliser.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit two pole linked circuit breaker with overload current release or two pole linked knife switch with fuse on each pole

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 12 ammeters 4 voltmeters ✓ synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection yes Earth Testing, state means provided Ohm-meter Preference Tripping, state if provided YES, and tested YES

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type yes make of fuses A. Croci & U. Farinelli S.p.A. Milan are all fuses labelled yes If circuit breakers are provided for the generators, at what overload do they operate Pref. 10% Others 25%, and at what current do the reverse current protective devices operate 10% 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 4% volts. 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 State type of cables (if in conduit this should also be stated) in machinery spaces LEAD COVERED STEEL BRAIDED PART IN CONDUIT AS REG'D. galleys AS FOR MACHY SPACES and laundries NONE State how the cables are supported or protected steel braided armoured cables clipped and supported as per Rules

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

Have refrigeration fan motors been constructed under survey ✓ and test certificates supplied ✓

Are the motors accessible for maintenance at all times ✓



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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. yes Emergency Supply, state position 20 KW Emergency generator situated at forward end of E.R. at Main Deck level.

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, fitted and adequately ventilated as per Rule. yes, state battery capacity in 30 Ahr. 220V. Where required to do so does it comply with 1948 International Convention. Yes
 ampere hours 100 Ahr. 220V.
 Phones etc. 40 Ahr. 24V.
 Lighting, is fluorescent lighting fitted. No If so, state nominal lamp voltage. ✓ and compartments where lamps are fitted. ✓

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

Searchlights, No. of 1, whether fixed or portable. Semi-portable 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. none 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. none

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule. yes

Lightning Conductors, where required are they fitted as per Rule. yes

Ships carrying Oil having a Flash Point of 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 all cables lead covered as per Rule. ✓

E.S.D., if fitted state maker. Marconi-London location of transmitter and receiver. between floors 103/104

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				TYPE.	PRIME MOVER.	MAKER.
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.			
MAIN	one	Cant. Riun. dell'Adriatico	136.5	220	621	500	Diesel	Cant. Riun. dell'Adriatico	
	two	Monfalcone	84	220	382	500	do	S. Andrea	
EMERGENCY	one	do	20	220	91	1400	do	Motoren Werke Mannheim	

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	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	5 Cyl.	1	136.5	2	315	621	662	10	V.I.R. Lead & Steel braided
"	EQUALISER	3	84	1	315	370.5	337	10	do
"	EQUALISER	2	84	1	400	382	388	10	do
"	EQUALISER	1	20	1	250	191	283	10	do
EMERGENCY GENERATOR	1	20	1	1	50	91	97	23	do

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No. of	Kw.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
FC1 Power to Ford. Cargo Winches	1	160	1	535/214	212	50	53	V.I.R.	Lead & Steel braided
FC2 " " Aft " "	1	160	1	535/214	212	53	53	do	do
FC3 " " Boat " "	1	25	1	60/30	62	22	22	do	do
FC4 " " Galley hot plates etc.	2	16	1	48	96	24	24	do	do
FC5 " " Thermostat tanks	1	32	1	65	72	25	25	do	do
FC6 " " Galley bakery etc.	1	125	1	140	176	23	23	do	do
FM1 Sub-distribution E.R. Motors	1	250	1	378/266	283	22	22	do	do
FM2 " " " "	1	125	1	184/110	176	16	16	do	do
FM3 " " " "	1	80	1	152/110	136	16	16	do	do
SOM Power to Workshop	2	10	1	26	74	20	20	do	do
SFR " " Refrigerated plant	2	10	1	30	74	15	15	do	do
SC " " Donkey boiler	2	6.3	1	25	30	20	20	do	do
QDP " " Emergency Gen. S.B.	1	100	1	90	158	23	23	do	do

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

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.			
CL1/2/3 Lighting Cabins Boatdeck	2	10	13.6	74	23	V.I.R.	Lead & Steel braided
CL4&CL5 " " Upper deck	2	10	13.6	74	20	do	do
CL6 " " main Eng. Room	2	10	18.2	74	23	do	do
CL7&CL8 " " Cabins Main deck	2	10	13.6	74	13	do	do
CL9 " " Aft	2	6.3	13.6	60	72	do	do
CL10&CL11 " " Outside & Cargo Clusters	2	10	25	74	18	do	do
SRAE Radar, Gy.C & E.S.D.	2	20	32	114	35	do	do
S Navigation Lights	2	4	1	42	37	do	do
SRT Winches R.T.	2	4	13.6	42	30	do	do
Searchlight	2	6.3	13.6	60	78	do	do
FROM EMERGENCY SUPPLY (See 'as built' drawing 16/835E)							
To CL1, CL2 & CL3 Lighting	2	10	13.6	74	20	V.I.R.	Lead & Steel braided
To S Navigation lighting	2	4	1	42	30	do	do
To SRT wireless R.T.	2	4	13.6	42	25	do	do
To Boxes for above	2	10	28.2	96	10	do	do

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
49 Windlass	1	46	1	125	178	776	00	VIR	Lead & steel braided
58 steering gear	1	10	2	16	41	96	70	do	do
39&40 Lub. Oil pumps	2	40	1	125	150	176	23	do	do
44&45 Air Compressors	2	41	1	125	153	176	26	do	do
FW SW & Reverse Cir. pumps	3	20	1	40	78	83	10	do	do
General service pump	1	23	1	50	90	97	10	do	do
Bilge & Ballast pump	1	14	1	25	55	62	12	do	do
Fuel valve cooling water pumps	2	1.8	2	2.5	8.6	22	10	do	do
Fuel oil transfer pump	1	19	1	40	74	83	12	do	do
Fuel oil service pump	1	3	2	4	13.6	42	12	do	do
S.W. Circ. to aux. engines	2	5	2	6.3	22	60	10	do	do
L.O. " " " "	1	3	2	4	13.6	42	10	do	do
E.R. Ventilation fans	2	4	2	6.3	17	60	14	do	do
O.F. pump boiler inst.	2	0.5	2	1.2	2.7	12	8	do	do
O.F. Inst. boiler fan	1	0.5	2	1.2	2.7	12	8	do	do
Turning gear	1	8	2	10	32	74	6	do	do
Cargo winches	8	36	1	80	120	136	8	do	do
Boat winches	2	7.5	2	10	30	74	10	do	do
Warping	1	28	1	50	112	97	75	do	do
Emergency Fire & Bilge	1	26	1	63	104	116	16	do	do
FROM EMERGENCY SUPPLY (See 'as built' drawing 16/835E)									
Emergency Fire & Bilge	1	26	1	63	104	116	10	VIR	Lead & Steel braided

NOTE.—Use Rpt. 43 Continuation Sheet if the above space is insufficient.

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

COMPASSES.

Have the compasses been adjusted under working conditions... YES.

CANTIERI RIUNITI DELL'ADRIATICO

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 M/V "STAR OF ALEXANDRIA" (CRDA Yard No. 1778)

Plans. Are approved plans forwarded herewith... yes (Also 'as built' plan) If not, state date of approval... ✓

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

General Remarks. (State quality of workmanship and materials, 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 the Society's Rules.

The materials and workmanship are good.

On completion the equipment was tried under working conditions and found satisfactory.

The insulation resistance was tested throughout and found good.

The electrical equipment is, in my opinion, suitable for a classed vessel.

ntd/25112517-53

Total Capacity of Generators... 324.5 Kilowatts.

The amount of Fee ... £ 155.15.0 When applied for, 4.7 19 53

Travelling Expenses (if any) £ see Rpt 42 When received, 19

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

Committee's Minute... FRIDAY - 7 AUG 1953

Assigned... See F.E. maly. rpt.

2.48 1977

2m.8.50.—Transfer. (MADE AND PRINTED IN GREAT BRITAIN) (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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