

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 15.3.1949 When handed in at Local Office 24.3.1949 Port of TRIESTE

No. in Survey held at Trieste Date, First Survey See Rpt 4b Last Survey 19. (Number of Visits.....)

95603 on the m.v. "Port Said" Tons {Gross... ✓ Net... ✓

Built at Trieste By whom built Cant. Riv. dell' Adriatico Yard No. 1747 When built 1949

Owners Mistr Navigation Co. Port belonging to Alexandria

Electrical Installation fitted by Cantieri Riuniti dell' Adriatico Contract No. ✓ When fitted 1949

Is vessel fitted for carrying Petroleum in bulk no. Is vessel equipped with D.F. yes E.S.D. yes Gy.C. ✓ Sub.Sig. ✓

Have plans been submitted and approved yes System of Distribution two wire Voltage of supply for Lighting 220

Heating ✓ Power 220 Direct or Alternating Current, Lighting D.C. Power D.C. If Alternating Current state periodicity ✓ Prime Movers,

has the governing been tested and found as per Rule when full 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 yes 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 machinery space - 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 machinery space - port side

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 micaite - porcelain, 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 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

circuit breaker with overload and reverse current trip, with interlo-

cked single pole equalizer switch. -

and for each outgoing circuit double pole circuit breaker with overload trip or

fuse on each pole. -

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 9

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 two indicating lamps

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an approved type diazed, are all fuses labelled as

per Rule yes If circuit breakers are provided for the generators, at what overload current did they open when tested 30%, are the reversed current

protection devices connected on the pole opposite to the equaliser connection yes, have they been tested under working conditions, and at what current

did they operate 5% 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 yes,

state maximum fall of pressure between bus bars and any point under maximum load 4 Volts, are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets yes or clamped Are paper insulated and varnished cambric insulated cables sealed at the 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 yes, if so, are they adequately protected yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit . State how the cables are supported and protected clipped as per Rules - lead covered - steel braided

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 emergency switchboard

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 yes, are they adequately ventilated yes what is the battery capacity in ampere hours 24 Volts - 40 Amps.

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 , are all fittings and accessories constructed and installed as per Rule . Searchlight Lamps, No. of 1, whether fixed or portable portable, are their fittings as per Rule yes. ~~Searchlight~~ Cooking, is the general construction as per Rule yes, are the frames effectually earthed yes, 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 . Are motors coupled to oil fuel transfer and unit 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 . 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 . Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships . Are the cables lead covered as per Rule . 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 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	3	150	220	682	320	diesel engine	heavy oil	150° F.
EMERGENCY	1	24	220	109	800	do	do	do
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet) metres	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	150	3	600	682	735	40	Rubber	lead cov. - steel brai.
" EQUALISER		2	400			40	do	do
EMERGENCY GENERATOR	24	1	60	109	113	12	do	do
ROTARY TRANSFORMER: MOTOR								
" GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet) metres	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...							
Power distribution F. 1 winches	1	85	104	135	130	Rubber	Steel braid - lead cov.
do F. 2 do	1	95	133	150	60	do	do
do F. 3 do	1	200	235	245	110	do	do
do F. 4 pumps	1	150	188	202	30	do	do
do F. 5 do	1	200	190	245	60	do	do
do F. 6 do	1	15	36	46	50	do	do
do F. 8 do	1	200	228	245	70	do	do
do F. 9 do	1	50	80	100	70	do	do
do F. 10 refig.	1	300	320	320	50	do	do
do F. 11 fans	1	40	66	86	90	do	do
do F. 12 workshop	1	11	24	41	80	do	do
do F. 13 lights	1	11	20	41	90	do	do
do F. 14 do	1	8	20	35	80	do	do
do F. 15 do	1	15	30	46	150	do	do

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	No.	Sectional Area of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet) metres	INSULATED WITH.	HOW PROTECTED.
WIRELESS	1	8	20	35	100	do	do
NAVIGATION LIGHTS	1	2	2	10	100	do	do
LIGHTING AND HEATING							
Searchlight	1	8	15	35	140	do	do
Eng. & refig. lights	84	4.5	10	24	52	do	do
Outside & cargo clusters lights	86	11	25	41	30	do	do
Fore, after & midship	87	6.5	20	31	10	do	do
Crew's & Officer's	88	8	25	35	30	do	do
Passenger	89	6.5	20	31	50	do	do
do	90	6.5	25	31	30	do	do
Eng. & refiger.	85	4.5	10	24	52	do	do

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	Sectional Area of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet) metres	INSULATED WITH.	HOW PROTECTED.
Steering gear	1	20	50	80	100	170	do	do
Windlass	1	54.5	120	216	191	160	do	do
Capstan	1	21.8	50	87	100	200	do	do
Refriger. compr.	2	45	150	168	202	20	do	do
Start. air	2	47	135	177	189	76	do	do
Bilge pump	1	30	75	114	130	56	do	do
Ballast	1	30	75	114	130	40	do	do
Fire	1	24	50	92	100	10	do	do
V.O.	1	17	30	68	71	30	do	do
F.O.	1	26	60	98	113	44	do	do
L.O.	1	35	95	134	150	30	do	do
Turning gear	1	10	12.5	40.8	43	20	do	do
Piston cooling pump	1	29	20	50	53	10	do	do
Cylinder	1	29	75	110	130	60	do	do
Refrigerating fans	1	9	12.5	36.4	43	30	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.

..... Electrical Engineers. Date.....

COMPASSES.

Minimum distance between electric generators or motors and standard compass..... 40 feet

Minimum distance between electric generators or motors and steering compass..... 42 feet

The nearest cables to the compasses are as follows:—

A cable carrying 0.5 Ampères 6 feet from standard compass 4 feet from steering compass.

A cable carrying 2 Ampères 12 feet from standard compass 10 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 nil degrees on any course in the case of the

standard compass, and nil degrees on ✓ course in the case of the steering compass.

Cantieri Riuniti Dell' Adriatico
 FABBRICA MAGGIORE S. ANTONIO

[Signature] Builder's Signature. Date.....

Is this installation a duplicate of a previous case yes If so, state name of vessel "Star of Suez" Yard 1742

Plans. Are approved plans forwarded herewith yes If not, state date of approval..... ✓

Certificates. Are certificates of test for motors engaged on essential 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 installation of this vessel has been constructed and fitted out under special survey in accordance with the approved plans and Secretary's letters - All generators and essential motors were constructed and tested in accordance with the Rules - The workmanship and materials used are good - On completion the insulation resistance was tested and the plant tried under full working conditions and all found satisfactory - In our opinion, this installation may be accepted for classification -

Noted and 26/4/49

Total Capacity of Generators..... 474 ✓ Kilowatts.

The amount of Fee ... Live 244'440 = } When applied for, ✓ 19.....
 Travelling Expenses (if any) £ ✓ : } When received, ✓ 19.....

[Signature] *[Signature]*
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRM 29 APR 1949

Assigned *See F.E. mch. opt.*

5m. 4.30.—Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)