

REPORT ON ELECTRICAL EQUIPMENT

NOV DEC 1952

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 27-11-1952 When handed in at Local Office 28-11-1952 Port of West Hartlepool.

No. in Survey held at West Hartlepool. Date, First Survey 22.8.52. Last Survey 12.11.52.
Book. (No. of Visits 10)

594 on the S.S. "Evgenia." Tons { Gross 7404.
Net 4488.

built at West Hartlepool. By whom built Wm Gray & Co. Ltd. Yard No. 1254. When built 1952.

Owners M. G. Livanos. Port belonging to Monrovia.

Installation fitted by Wm Gray & Co. Ltd. When fitted 1952.

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. - Radar Yes.

Plans, have they been submitted and approved Yes. System of Distribution Two wire insulated. Voltage of Lighting 110.

Heating 110. Power 110. 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 No. 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 - Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule Yes. Position of Generators Starboard side.

Inboard and outboard on starting platform level.

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 Fore and aft on

flat immediately above generators and facing port side.

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 Sindanga. if of synthetic insulating material is it an Approved Type Yes. 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 Double Pole Double Throw Quick Break Knife Switch and Double Pole Fuses.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Double Pole Double Throw Quick Break Knife Switch and Double Pole Fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes. Instruments on main switchboard 8

ammeters 2 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 - Earth Testing, state means provided Earth lamp

coupled to 'E' thro switches & fuses. Preference Tripping, state if provided - and tested -

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

make of fuses "Artie" are all fuses labelled Yes. If circuit breakers are provided for the generators, at what overload do they operate - and at what current do the reverse current protective devices operate - Cables, are they insulated and protected as per Rule 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 < 6.6 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 No. if so, are they adequately protected - State type of cables (if in conduit this should also be stated) in machinery spaces V.I.R. cables in conduit, galleys, V.I.R. I.C.

and laundries - State how the cables are supported or protected Generator mains D.D.R. cables in plumbers pipe. V.I.R. cable in conduit in Engine Room, tunnel, messhouse, turin decks and forecath. Lead covered cables in accommodation claled to wood grounds.

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 -

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. Emergency Supply, state position Yes.

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 Yes, ampere hours Yes. Where required to do so does it comply with 1948 International Convention Yes.

Lighting, is fluorescent lighting fitted Yes. If so, state nominal lamp voltage Yes and compartments where lamps are fitted Yes.

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 Yes, whether fixed or portable Yes, are they of the carbon arc or of the filament type Yes.

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.

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

E.S.D., if fitted state maker Submarine Sig. Co. location of transmitter and receiver Frames 140/141 Port & Starboard.

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.
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN	2	Sunduland Forge & Eng. Co. Ltd.	25	110	237	685	Steam Sunduland Forge & Eng. Co. Ltd.	
EMERGENCY ROTARY TRANSFORMER								

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	1	25	2	19/083	237	236	30	V.I.R.	Conduit
" " EQUALISER	1	25	2	19/083	237	236	30	V.I.R.	Conduit
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
" " GENERATOR									

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

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 switchboard to Navigation	1		1	7/052	19.45	37	438 V.I.R. L.B.
Main switchboard to Saloon	1		1	19/044	52.01	53	348 V.I.R. Conduit
S.B.1. to Bridge Deck	1		1	7/036	18.37	24	60 V.I.R. L.B.
S.B.1 to Saloon Deckhouse	1		1	7/052	33.64	37	6 V.I.R. L.B.
Alternative supply to Navigation	1		1	3/029	1.82	5	48 V.I.R. L.B.
Main switchboard to Engine Room	1		1	19/044	49.74	53	135 V.I.R. Conduit
S.B.2 to Engine Room Deckhouse Pt.	1		1	7/036	21.69	24	78 V.I.R. L.B.
S.B.2 to Engine Room Deckhouse Sld.	1		1	7/036	16.35	24	6 V.I.R. L.B.
Main switchboard to Lower Aft	1		1	19/044	49.7	53	435 V.I.R. Conduit
S.B.3 to Poop Deckhouse	1		1	7/029	13	15	60 V.I.R. L.B.
S.B.3 to Laundry Scket Outlet	1		1	7/029	15	15	51 V.I.R. L.B.
S.B.3 to Upper Deck Aft	1		1	7/036	21.7	24	6 V.I.R. L.B.
Main switchboard to Mech. Ventilation	1		1	19/052	60.4	64	141 V.I.R. Conduit
Main switchboard to Cargo Lighting	1		1	7/064	42.22	46	141 V.I.R. Conduit

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
B.4 to Cargo Foremast	1	7/052	13.83	37	510	V.I.R.	Conduit
B.4 to Cargo Mainmast	1	7/036	13.83	24	219	V.I.R.	Conduit
Main switchboard to Eng. Room Power	1	19/083	92.11	118	30	V.I.R.	Conduit
B.5 to Engine Room Power	1	19/044	49.2	53	15	V.I.R.	Conduit
Main switchboard to Whirlies	1	7/064	42.91	46	30	V.I.R.	Conduit
Main switchboard to Radar	1	19/064	25	83	435	V.I.R.	Conduit
Main switchboard to Brown's Eye Comp.	1	7/036	6	24	420	V.I.R.	Conduit
Main switchboard to Refrigeration	1	19/064	42.41	83	390	V.I.R.	Conduit
Main switchboard to Suez Canal Proj.	1	19/044	27.27	53	702	V.I.R.	Conduit

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	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.	
Supply Fan No. 1. Saloon Deckhouse	1	2	1	7/064	18	46	450 V.I.R. Conduit
Supply Fan No. 2. Engine Room Deckhouse	1	2	1	7/036	18	24	120 V.I.R. L.B.
Supply Fan No. 3. Poop Deckhouse	1	2	1	7/064	18	46	429 V.I.R. Conduit
Battery Exhaust Unit No. 4. Jwd.	1	0.25	1	3/029	3.2	5	120 V.I.R. L.B.
Battery Exhaust Unit No. 5. Aft.	1	0.25	1	7/029	3.2	15	480 V.I.R. Conduit
Laths.	1	2	1	7/036	18	24	54 V.I.R. Conduit
Drilling Machine.	1	0.75	1	3/036	8.5	10	54 V.I.R. Conduit
Sinker	1	0.75	1	3/036	8.5	10	45 V.I.R. Conduit
Sanitary Pump.	1	0.75	1	3/036	8.5	10	60 V.I.R. Conduit
Oil Purifier	1	0.5	1	3/036	5.7	10	72 V.I.R. Conduit
S.W. Pump. (Refrig.)	1	0.75	1	7/036	8.55	24	430 V.I.R. Conduit
Refrig. Compressor	2	4.0	1	19/064	35.0	83	390 V.I.R. Conduit
Battery S.W. Pump.	1	0.75	1	3/036	8.5	10	135 V.I.R. L.B.
Battery Blowers.	2	0.25	1	3/029	3.2	5	120 V.I.R. L.B.

NOTE.—Use Rpt. 13 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.

For William Gray & Co., Limited

Electrical Contractors.

Date 20. 11. 1952.

Director

COMPASSES.

Have the compasses been adjusted under working conditions.

For William Gray & Co., Limited

Builder's Signature.

Date 20. 11. 1952.

Director

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. Yes. 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 on this vessel has been installed under special survey and the arrangements are in accordance with or equivalent to those shown on the approved plans and the Rules for Electrical Equipment.

The materials used are of good quality and the workmanship is good.

On completion the equipment was operated under working conditions and the insulation resistance of all circuits measured and found good.

This installation is in my opinion suitable for a classed vessel.

Special Notation :- D.F., E.S.D., Gyro C and Radar.

Total Capacity of Generators 50 Kilowatts.

The amount of Fee ... £ 42 : 10 : When applied for, 9-12-1952
Radio-telegraphy but £ 6 : 0 : When received,

Travelling Expenses (if any) £ : : 19

P. Wills.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 6 JAN 1953

Assigned See F.E. memo rpt

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

22
11. 12. 52.

Date 31-12-52



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