

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

17 AUG 1947

Date of writing Report. 28th July 47 When handed in at Local Office. 30. 7. 47 Port of NEWCASTLE-ON-TYNE
 No. in Survey held at Walker-on-Tyne. Date, First Survey (1946) Dec. 2 Last Survey July 28 1947
 Reg. Book. 85815 on the S.S. "ASHANTIAN" (Number of Visits 13)

Built at Newcastle By whom built Shipbuilding Corp. Ltd. (Tyne Branch) Yard No. 14 Tons Gross 5123.40 Net 2854.77
 Owners United Africa Co. Ltd. Port belonging to London When built 1944

Electrical Installation fitted by Shipbuilding Corp. (Tyne Branch) Ltd. Contract No. — When fitted 1944
 Is vessel fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. No Sub.Sig. No

Have plans been submitted and approved Yes System of Distribution Two Wire - Insulated Voltage of supply for Lighting 110
 Heating — Power 110 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 No, 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 — 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 In Engine Room

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 Near generators

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 Sindanyo, 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 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 Low Volt Releases

and for each outgoing circuit Double Pole Changeover Switch with a fuse on each insulated pole

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard Yes ammeters Yes voltmeters — synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the equaliser connection — Earth Testing, state means provided Earth Lamps

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, 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 150% of I_n are the reversed current protection devices connected on the pole opposite to the equaliser connection —, have they been tested under working conditions, and at what current did they operate — 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 —, state maximum fall of pressure between bus bars and any point under maximum load 4.3 Volts, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends Yes

with insulating compound No or waterproof insulating tape No. 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 No, are cables laid under machines or floorplates No, if so, are they adequately protected No. Are cables in machinery spaces, galleys, laundries, etc., lead covered No or run in conduit No. State how the cables are supported and protected Main Cables - V.I.R. in conduit
Accommodation cables - Lead covered on wood grounds

Are all lead sheaths, armouring and conduits effectually bonded and earthed No. Refrigerated chambers, are the cables and fittings as per Rule -. Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands No, where unarmoured cables pass through beams, etc., are the holes effectually bushed No and with what material Lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule No. Emergency Supply, state position - and method of control -.

Navigation Lamps, are they separately wired No controlled by separate double pole switches No and fuses No. Are the switches and fuses in a position accessible only to the officers on watch No, is an automatic indicator fitted No. Secondary Batteries, are they constructed and fitted as per Rule -, are they adequately ventilated -. what is the battery capacity in ampere hours -.

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof No. 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 No. are all fittings and accessories constructed and installed as per Rule No. Searchlight Lamps, No. of -, whether fixed or portable -. are their fittings as per Rule -. Heating and Cooking, is the general construction as per Rule -. are the frames effectually earthed -, are heaters in the accommodation of the convection type -. Motors, are all motors constructed and installed as per Rule No and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil No, 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 -. 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 -. Control Gear and Resistances, are they constructed and fitted as per Rule No. Lightning Conductors, where required are they fitted as per Rule No. 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 No, are they suitably stored in dry situations No. Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory No.

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	15	110	136	550	STEAM ENGINE	-	-
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	15	1	19/083	136	191	40	V.C.	IN CONDUIT
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
Thermotank S.B.	1	19-083	78	118	112	V.I.R.	In Conduit
Alt Accommodation S.B.	1	19-083	40.8	118	96	V.I.R.	In Conduit
Midship Accommodation S.B.	1	19-083	62.7	118	210	V.I.R.	In Conduit

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7-064	20	46	220	V.I.R.	In Conduit + L.C.
NAVIGATION LIGHTS	1	7-044	1.9	31	220	V.I.R.	In Conduit + L.C.
LIGHTING AND HEATING							
Grew Lighting Alt. D.B.	1	7-064	34.0	46	248	V.I.R.	In Conduit
Engineer Accommodation Port	1	7-036	22.0	24	12	V.I.R.	In Conduit
Engineer Accommodation Star	1	7-036	18.0	24	12	V.I.R.	In Conduit
Off Masthouse Cargo Etc.	1	7-036	10.2	24	194	V.I.R.	In Conduit
Engine + Boiler Rooms Etc.	1	7-064	30	46	40	V.I.R.	In Conduit
Off Masthouse + Forecastle Etc.	1	7-044	19	31	205	V.I.R.	In Conduit
Officer Lighting	1	7-044	23	31	30	V.I.R.	Lead Covered
Midship Accom. Etc. Port	1	7-036	18	24	20	V.I.R.	Lead Covered
Midship Accom. Etc. Star	1	7-036	22	24	20	V.I.R.	Lead Covered

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.		No.	B.H.P.						
Accom. Thermotank Fan Motors	3	3	1	7-064	26	46	326	V.I.R.	In Conduit
Domestic Refrig. Motor	1	2 1/2	1	7-064	23	46	206	V.I.R.	In Conduit

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 and on behalf of
SHIPBUILDING CORPORATION LIMITED (TYPE BRANCH)

Electrical Engineers.

Date 28 July 1947

COMPASSES.

Minimum distance between electric generators or motors and standard compass 30 feet.

Minimum distance between electric generators or motors and steering compass 32 feet.

The nearest cables to the compasses are as follows:—

A cable carrying 0.14 Ampères 6 feet from standard compass inside feet from steering compass.

A cable carrying 0.14 Ampères inside 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 Nil degrees on Every course in the case of the

standard compass, and Nil degrees on Every course in the case of the steering compass.

Builder's Signature.

Date 28 July 1947.

Is this installation a duplicate of a previous case No. If so, state name of vessel

Plans. Are approved plans forwarded herewith No. If not, state date of approval 24th February 1947

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 equipment of this vessel has been installed in accordance with the Society's Rules and Regulations and the arrangements are in accordance with or equivalent to those shown on the approved plans.

The materials used are of good quality and the workmanship is satisfactory. On completion the insulation resistance of all circuits was above Rule Requirements and the generator operated on load and governing trials with satisfactory Results. All the requirements of the Ministry of Transport Specification have been carried out.

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

Noted. Sent 17/9/47

Total Capacity of Generators 30 Kilowatts.

The amount of Fee ... £ 30: 0: 08 - AUG 1947

SPEC. £ 7: 10: 0

Travelling Expenses (if any) £ : : When received. 19.

Surveyor to Lloyd's Register of Shipping.

FRI. 19 SEP 1947

Committee's Minute

Assigned See F.E. mchly opt.



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