

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

8 SEP 1939

Received at London Office

Date of writing Report 30th Aug 39 When handed in at Local Office 6/9/39 Port of West Hartlepool

No. in Survey held at West Hartlepool Date, First Survey 9th June Last Survey 30th Aug 1939
(Number of Visits 10)

Reg. Book. Supp. on the S.S. "ATLANTIC" Tons {Gross 5414.07
Net 3244.90

Built at West Hartlepool By whom built Tom Gray & Co. Ltd. Yard No. 1094 When built 1939

Owners Sir W. H. Cockburn Port belonging to Hull

Electrical Installation fitted by Tom Gray & Co. Ltd. Contract No. 1094 When fitted 1939

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 simple wire Voltage of supply for Lighting 110

Heating no Power 110 Direct no Alternating Current, Lighting yes Power yes If Alternating Current state frequency no Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off yes Are turbine emergency governors fitted with a

trip switch as per Rule no Generators, are they compound wound yes, are they level compounded under working conditions yes,

if not compound wound state distance between generators no and from switchboard no 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

Positive Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing no 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 Engine room starboard side aft

no, 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 no and vertically no, 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 Engine room starboard side on

after bulkhead new generation

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 no and vertically no, what insulation

material is used for the panels slate, if of synthetic insulating material is it an Approved Type no, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule yes 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 knife

switch and double pole fuse

and for each outgoing circuit Single pole knife switch and double pole fuse

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule no Instruments on main switchboard One

ammeters One voltmeters no synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection no Earth Testing, state means provided 2 lamps coupled to 2 through wires & fuses

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, are the reversed current protection devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions Yes. 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 Less than 1.5 inches 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 exposed ends Yes.

with insulating compound Yes or waterproof insulating tape 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 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 Yes. State how the cables are supported and protected L.C.A. cables clipped to surface or V.I.R. cables in conduit

in machinery spaces; V.I.R. Armoured & Braided cables in tunnels; L.C.A. cables clipped to wood frames or to surface in room.

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 effectively 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 Yes and method of control Yes.

Navigation Lamps, are they separately wired Yes controlled by separate S.P. Yes O.A. Yes 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.

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 Yes, if so, how are they protected Yes.

and where are the controlling switches fitted Yes, are all fittings suitably ventilated Yes. are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of Yes, whether fixed or portable Yes, are their fittings as per Rule 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 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 Yes and vertically 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 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 the cartridge type Yes.

are they of an approved type Yes. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type Yes. 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 megger 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	1	10	110	91	600	Single expansion steam engines		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (load 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	10	1	19/072	91	97	66	V.I.R.	L.C.A. & B.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
AUX. SWITCHBOARDS AND SECTION BOARDS						
Saloon L.B. feed		1	19/052	29	64	360 V.I.R. A.B.
Supply - Saloon Ltg. D.B.		1	7/029	11	18.2	6 V.I.R. L.C.A.
Navigation Ltg. D.B.		1	7/029	6	18.2	6 V.I.R. L.C.A.
Eng. Comp. & Aux. Ltg. D.B.		1	7/036	12	24	6 V.I.R. L.C.A.

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
WIRELESS		1	7/036	12	24	370 V.I.R. A.B.
NAVIGATION LIGHTS						Feed from Saloon L.B. as above.
LIGHTING AND HEATING						
Engines & Boiler Room Ltg. D.B.		1	7/036	15	24	30 V.I.R. L.C.A.
Eng. & Aux. Ltg. D.B.		1	7/036	17.2	44	300 V.I.R. B. & A.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
Ref. Machy	1	2	7/044	18	31	400 V.I.R. A.B.	

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;

Wm. S. Simpson

William Gray & Co. Ltd. West Ham, London E. Electrical Engineers. Date 2nd Sept. 1939

COMPASSES.

Minimum distance between electric generators or motors and standard compass 125 feet

Minimum distance between electric generators or motors and steering compass 120 feet

The nearest cables to the compasses are as follows:—

A cable carrying .14 Ampères on the feet from standard compass 9 feet from steering compass.

A cable carrying .14 Ampères 9 feet from standard compass on the 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 all courses in the case of the

standard compass, and nil degrees on all courses in the case of the steering compass.

Wm. S. Simpson

Builder's Signature. Date 31st Aug 1939

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

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 under special survey. The materials used and the workmanship are good. On completion the equipment was examined and tested under working conditions, the generator engine governor was tested, the regulation and compensating of the generator was checked, the insulation resistances of all circuits was measured and the open gear was checked. The electrical equipment is in my opinion suitable for a classed vessel.

Noted
LH
13/9/39

Total Capacity of Generators 10 Kilowatts.

The amount of Fee ... £ 10 : - : When applied for, 19

Travelling Expenses (if any) £ : : When received, 14/10/39

Bantison

Surveyor to Lloyd's Register of Shipping.

15 SEP 1939

Committee's Minute

Assigned See Hpls J.E. 17969

2m.10.38.—Transfer. (MADE IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

