

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 11 AUG 1932

Date of writing Report 30th July 1932 When handed in at Local Office 19 Port of West Hartlepool
No. in Survey held at West Hartlepool. Date, First Survey 14 June 1932 Last Survey 27 July 1932
Reg. Book. (Number of Visits 7)
on the 55 KEPWICKHALL. Tons { Gross 1483.62
Net 2810.11

Built at WEST HARTLEPOOL. By whom built WILLIAM GRAY & CO LTD. Yard No. 1052. When built 1932.
Owners West Hartlepool (Arm Row Co Ltd Port belonging to West Hartlepool.
Electric Light Installation fitted by THE SUNDERLAND FORGE & ENG^g CO LTD. Contract No. When fitted 1932.
Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution DOUBLE WIRE

Pressure of supply for Lighting 110 volts, Heating 110 volts, Power 110 volts.

Direct or Alternating Current, Lighting Direct Power Direct

If alternating current system, state frequency of periods per second —

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes.

Generators, do they comply with the requirements regarding rating Yes, are they compound wound Yes.

are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel no, is an adjustable regulating resistance fitted in series with each shunt field —

Are all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes.

Position of Generators Main Engine Room

is the ventilation in way of the generators satisfactory Yes, are they clear of all inflammable material Yes

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators — and —, are the generators protected from mechanical injury and damage from water, steam or oil Yes

are their axes of rotation fore and aft Yes.

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generators in metallic contact Yes.

Main Switch Boards, where placed Main Engine Room.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard —

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes.

are they protected from mechanical injury and damage from water, steam or oil Yes, if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards — and —

are they constructed wholly of durable, non-ignitable non-absorbent materials Yes, is all insulation of high dielectric strength and of

permanently high insulation resistance Yes, if semi-insulating material is used, are all conducting parts insulated from the slab

with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework Yes

and is the frame effectively earthed Yes. Are the fittings as per Rule regarding: — spacing or shielding of live parts

Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, proportion of omnibus

bars Yes, individual fuses to voltmeter, pilot or earth lamp Yes, connections of switches Yes.

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Double Pole Switch

9 fuses for generator, single pole switch & double poles fuses for each outgoing circuit

Instruments on main switchboard 1 ammeters 1 voltmeters — synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Earth Lamp, switch

9 fuse on each pole.

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes.



Cables: Single, twin, concentric, or multicore Single are the cables insulated and protected as per Tables IV or V of the Rules yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 5.2.

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes.

Paper Insulated Cables. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound _____

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage Yes.

Support and Protection of Cables, state how the cables are supported and protected Mains - V.I.R Braided Cable run in Galv Iron P.T. Secured pipe. Machinery & Accommod spaces - Lead Covered and Braided Cables secured with Galv Iron or Brass Clips.
If cables are run in wood casings, are the casings and caps secured by screws _____, are the cap screws of brass _____, are the cables run in separate grooves _____, If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII Yes.

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements _____

Joints in Cables, state if any, and how made, insulated, and protected None made.

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yes.

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed Yes. state the material of which the bushes are made Lead.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas _____
_____ are their connections made as per Rule _____

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule Yes.

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven _____

Navigation Lamps, are these separately wired Yes. controlled by separate switch and separate fuses Yes. are the fuses double pole Yes.
are the switches and fuses grouped in a position accessible only to the officers on watch Yes.
has each navigation lamp an automatic indicator as per Rule Yes.

Secondary Batteries, are they constructed and fitted as per Rule _____

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight Yes.
are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected _____ no
are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected _____ no
_____, how are the cables led _____
where are the controlling switches situated _____

Searchlight Lamps, No. of _____, whether fixed or portable _____, are their fittings as per Rule _____

Arc Lamps, other than searchlight lamps, No. of _____, are their live parts insulated from the frame or case _____, are their fittings as per Rule _____

Motors, are their working parts readily accessible Yes. are the coils self-contained and readily removable for replacement Yes.
are the brushes, brush holders, terminals and lubricating arrangements as per Rule Yes. are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material Yes.
are they protected from mechanical injury and damage from water, steam or oil Yes. are their axes of rotation fore and aft Yes.
if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type _____, if not of this type, state distance of the combustible material horizontally or vertically above the motors _____ and _____

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule Yes.

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule _____

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings _____
If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office _____

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	380	Single Cylinder Steam Engine	—	—
AUXILIARY	—	—	—	—	—	—	—	—
EMERGENCY	—	—	—	—	—	—	—	—
ROTARY TRANSFORMER	—	—	—	—	—	—	—	—

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	1	.07592	19	.072	91	97	30	V.I.R.	Lead Covered & Braided
EQUALISER CONNECTIONS	—	—	—	—	—	—	—	—	—
AUXILIARY GENERATOR	—	—	—	—	—	—	—	—	—
EMERGENCY GENERATOR	—	—	—	—	—	—	—	—	—
ROTARY TRANSFORMER	—	—	—	—	—	—	—	—	—
ENGINE ROOM	1	.00455	7	.029	13.2	18.2	30	V.I.R.	Lead Covered & Braided
BOILER ROOM	—	—	—	—	—	—	—	—	—
AUXILIARY SWITCHBOARDS	—	—	—	—	—	—	—	—	—
Navigation & office Accom	1	.03960	19	.082	37.5	64	304	V.I.R.	Braided in Galv Iron Pipe
ACCOMMODATION (Engineroom)	1	.01462	7	.052	26.2	37	128	V.I.R.	Braided in Galv Iron Pipe
WIRELESS	1	.01046	7	.044	16	31	384	V.I.R.	Braided in Galv Iron Pipe
SEARCHLIGHT	—	—	—	—	—	—	—	—	—
MASTHEAD LIGHT	1	.00194	3	.029	38	48	608	V.I.R.	Braided in Galv Iron Pipe
SIDE LIGHTS	1	.00194	3	.029	38	48	64	V.I.R.	Lead Covered & Braided
COMPASS LIGHTS	1	.00194	3	.029	22	48	30	V.I.R.	Lead Covered & Braided
POOP LIGHTS	1	.00455	7	.029	4.61	10.2	368	V.I.R.	Braided in Galv Iron Pipe
CARGO LIGHTS	1	.00455	7	.029	7.25	13.2	176	V.I.R.	Braided in Galv Iron Pipe
ARC LAMPS	—	—	—	—	—	—	—	—	—
HEATERS (HOTWATER)	1	.00194	3	.029	4.5	7.8	48	V.I.R.	Lead Covered & Braided

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP	—	—	—	—	—	—	—	—	—	—
MAIN BILGE LINE PUMPS	—	—	—	—	—	—	—	—	—	—
GENERAL SERVICE PUMP	—	—	—	—	—	—	—	—	—	—
EMERGENCY BILGE PUMP	—	—	—	—	—	—	—	—	—	—
SANITARY PUMP	—	—	—	—	—	—	—	—	—	—
CIRC. SEA WATER PUMPS	—	—	—	—	—	—	—	—	—	—
CIRC. FRESH WATER PUMPS	—	—	—	—	—	—	—	—	—	—
AIR COMPRESSOR	—	—	—	—	—	—	—	—	—	—
FRESH WATER PUMP	—	—	—	—	—	—	—	—	—	—
ENGINE TURNING GEAR	—	—	—	—	—	—	—	—	—	—
ENGINE REVERSING GEAR	—	—	—	—	—	—	—	—	—	—
LUBRICATING OIL PUMPS	—	—	—	—	—	—	—	—	—	—
OIL FUEL TRANSFER PUMP	—	—	—	—	—	—	—	—	—	—
WINDLASS	—	—	—	—	—	—	—	—	—	—
WINCHES, FORWARD	—	—	—	—	—	—	—	—	—	—
WINCHES, AFT	—	—	—	—	—	—	—	—	—	—
STEERING GEAR—	—	—	—	—	—	—	—	—	—	—
(a) MOTOR GENERATOR	—	—	—	—	—	—	—	—	—	—
(b) MAIN MOTOR	—	—	—	—	—	—	—	—	—	—
WORKSHOP MOTOR	1	1	.00701	7	.036	24	24	30	V.I.R.	Lead Covered & Braided
VENTILATING FANS	—	—	—	—	—	—	—	—	—	—
Refrig Motor	1	1	.00701	7	.036	16	24	30	V.I.R.	Lead Covered & Braided

All Conductors are of annealed copper conforming to British Standard Specification No. 7.

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

p. pro. THE SUNDERLAND FORGE & ENGINEERING CO. LTD. Electrical Engineers.

Date 26/7/32.

Thos. Thompson

COMPASSES.

Distance between electric generators or motors and standard compass 118 feet

Distance between electric generators or motors and steering compass 108 feet

The nearest cables to the compasses are as follows:—

A cable carrying 4.1 Ampères 10 feet from standard compass 10 feet from steering compass.

A cable carrying .22 Ampères 10 feet from standard compass led into feet from steering compass.

A cable carrying .22 Ampères led into feet from standard compass 10 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.

For William Gray & Co., Limited.

W.W. Cole

Builder's Signature.

Date 29th July 1932

for General Master

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

General Remarks (State quality of workmanship, opinions as to class, &c.)

This installation has been fitted under survey. The materials and workmanship are good and efficient. On completion it was tried under full working conditions and found satisfactory

It is submitted that this vessel is eligible for THE RECORD. *elec light*

R.D. Chilston
23/8/32

Total Capacity of Generators 10 Kilowatts.

The amount of Fee ... £ 10 : 0 : When applied for, 10.8.19.32

Travelling Expenses (if any) £ : : When received, 14.9.19.32

R.D. Chilston

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

elec. light



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