

No. 6065

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Reporting Report 7th January 1953 When handed in at Local Office 10 Port of DURBAN.Surrey held at DURBAN. Date, First Survey 22ND SEPT. Last Survey 8TH DEC. 1952.
(Number of Visits 4)30 on the STEAM WHALER EMPIRE UNITAS X Tons { Gross 339.
Net 115.
When built 1939.No. at DANZIG By whom built F. SCHICHAU G. M. B. H. Yard No. -
rs BRITISH MINISTRY OF TRANSPORT. Port belonging to LONDON.

Electric Light Installation fitted by NOT KNOWN. Contract No. - When fitted 1939.

n of Distribution TWO WIRE INSULATED.

ure of supply for Lighting 115 volts, Heating - volts, Power - volts.

t or Alternating Current, Lighting DIRECT. Power -

rnering current system, state frequency of periods per second -

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

rators, do they comply with the requirements regarding rating YES, are they compound wound YES.

y over compounded 5 per cent. YES, if not compound wound state distance between each generator -

Are more than one generator is fitted are they arranged to run in parallel ONE ONLY, is an adjustable regulating resistance fitted in with each shunt field

I terminals accessible, clearly marked, and furnished with sockets YES, are they so spaced or shielded that they cannot be accidentally earthed,

circuited, or touched YES Are the lubricating arrangements of the generators as per Rule YES.

ion of Generators ENGINE ROOM AFTER END STARBOARD SIDE ON A RAISED PLATFORM.

ventilation in way of the generators satisfactory YES, are they clear of all inflammable material YES.

uated 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.

eir axes of rotation fore and aft YES.

hing, are the bedplates and frames of the generating plant efficiently earthed YES are the prime movers and

respective generators in metallic contact YES.

Switch Boards, where placed IN ENGINE ROOM ON STEEL BRACKETS BOLTED TO AFTER BULK^{HD} STAR^{BP} SIDE.

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

chboards, are they placed in accessible positions, free from inflammable gases and acid fumes YES.

ey protected from mechanical injury and damage from water, steam or oil YES, if situated near unprotected

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

ey constructed wholly of durable, non-ignitable non-absorbent materials YES, is all insulation of high dielectric strength and of

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

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

s the frame effectively earthed - 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

YES, individual fuses to voltmeter, pilot or earth lamp YES, connections of switches YES

Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches DOUBLE POLE LINKED

LAFESWITCHES WITH A FUSE ON EACH POLE. FOR THE MAIN SWITCH AND FOR EACH OUT-

NG CIRCUIT.

uments on main switchboard ONE ammeters ONE voltmeters - synchronising device for paralleling purposes.

h Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system EARTH LAMPS CONNECTED

EARTH THROUGH SWITCHES AND FUSES.

ches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules YES.

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



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Lloyd's Register
Foundation

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Cables: Single, twin, concentric, or multicore TWIN 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

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 boiler 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 IN E & B ROOMS L.C. CABLES ARE SECURED TO PERFORATED STEEL TRAYS BY STRONG CLIPS. ELSEWHERE L.C. CABLE SECURED TO HARDWOOD BATTENS BY STRONG CLIPS. TO FORWARD ACCOM: L.C. CABLES LED THROUGH SOLID DRANN STEEL TUBE WHICH PASSES THRU PIPE TUNNEL

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

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 FIBRE

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 -

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 NO

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

where are the controlling switches situated -

Searchlight Lamps, No. of NONE, whether fixed or portable -, are their fittings as per Rule -

Are Lamps, other than searchlight lamps, No. of NONE, are their live parts insulated from the frame or case -, are their fittings as per Rule -

Motors, are their working parts readily accessible NONE, are the coils self-contained and readily removable for replacement -

are the brushes, brush holders, terminals and lubricating arrangements as per Rule -, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material -

are they protected from mechanical injury and damage from water, steam or oil - are their axes of rotation fore and aft -

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 YES

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 DOES NOT APPLY

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.
... <u>ONE</u>	<u>7.8</u>	<u>115</u>	<u>114</u>	<u>600</u>	<u>VERTICAL SINGLE CYL. STEAM ENGINE.</u>			
... <u>NONE</u>								
... <u>NONE</u>								
... <u>-</u>								

LIGHTING AND HEATING CONDUCTORS.

No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	<u>2</u>	<u>.361</u>	<u>19</u>	<u>.16</u>	<u>10.0</u>	<u>10'-0"</u>	<u>V.I.R.</u>	<u>LEAD COVERED</u>
	EQUALISER CONNECTIONS...	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	AUXILIARY GENERATOR...	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	EMERGENCY GENERATOR...	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	ROTARY TRANSFORMER...	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	AUXILIARY SWITCHBOARDS...	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	ENGINE ROOM...	<u>2</u>	<u>.007</u>	<u>7</u>	<u>.036</u>	<u>30</u>	<u>40'-0"</u>	<u>V.I.R.</u>	<u>LEAD COVERED</u>
	BOILER ROOM...	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	ACCOMMODATION FORWARD...	<u>2</u>	<u>.007</u>	<u>7</u>	<u>.036</u>	<u>30</u>	<u>60'-0"</u>	<u>V.I.R.</u>	<u>LEAD COVERED</u>
	" AFT...	<u>2</u>	<u>.007</u>	<u>7</u>	<u>.036</u>	<u>30</u>	<u>60'-0"</u>	<u>V.I.R.</u>	<u>LEAD COVERED</u>
	WIRELESS ROOM AND MESS ROOM...	<u>2</u>	<u>.007</u>	<u>7</u>	<u>.036</u>	<u>30</u>	<u>30'-0"</u>	<u>V.I.R.</u>	<u>LEAD COVERED</u>
	SHORE SUPPLY...	<u>2</u>	<u>.007</u>	<u>7</u>	<u>.036</u>	<u>30</u>	<u>20'-0"</u>	<u>V.I.R.</u>	<u>LEAD COVERED</u>
	WIRELESS...	<u>2</u>	<u>.007</u>	<u>7</u>	<u>.036</u>	<u>30</u>	<u>30'-0"</u>	<u>V.I.R.</u>	<u>LEAD COVERED</u>
	SEARCHLIGHT...	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	MASTHEAD LIGHT...	<u>2</u>	<u>.007</u>	<u>3</u>	<u>.036</u>	<u>5</u>	<u>-</u>	<u>V.I.R.</u>	<u>LEAD COVERED</u>
	SIDE LIGHTS...	<u>2</u>	<u>.007</u>	<u>3</u>	<u>.036</u>	<u>5</u>	<u>-</u>	<u>V.I.R.</u>	<u>LEAD COVERED</u>
	COMPASS LIGHTS...	<u>2</u>	<u>.003</u>	<u>3</u>	<u>.036</u>	<u>5</u>	<u>-</u>	<u>V.I.R.</u>	<u>LEAD COVERED</u>
	POOP LIGHTS...	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	CARGO LIGHTS...	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	ARC LAMPS...	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	HEATERS...	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

MOTOR CONDUCTORS.

No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	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...								
	VENTILATING FANS...								

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.

Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass 30' - 0"

Distance between electric generators or motors and steering compass 24' - 0"

The nearest cables to the compasses are as follows:—

A cable carrying 5 Ampères 6' feet from standard compass 6 feet from steering compass.

A cable carrying - Ampères - feet from standard compass - 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 -

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted -

The maximum deviation due to electric currents was found to be - degrees on - course in the case of the standard compass, and - degrees on - course in the case of the steering compass.

Builder's Signature.

Date

Is this installation a duplicate of a previous case *NOT KNOWN* so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) *A full Classification Survey has been carried out on the Hull and Machinery of this Ship.*

The Electrical Equipment has been examined and tested throughout. The cables, switchgear, distribution boxes, fuses and fittings have been examined and placed or found in order. The generator has been examined and tested and found satisfactory and the governor gear tested and found efficient. The layout and arrangement of circuits, switchgear and fittings are in accordance with the Rules except that the Navigation Lights have no alternative circuit in case of failure. This alternative arrangement was not fitted at this time as a suitable change over switch was not available. It is recommended that this be dealt with on completion of the present refitting season.

The electrical equipment has been efficiently installed and on trying under working conditions was found efficient.

In our opinion this equipment is suitable for a classed ship.

Please refer to the Secretary's letter reference "Ship" dated 17th July, 1952.
ATTACHED HERETO IS A PLAN OF THE ELECTRICAL INSTALLATION.

Total Capacity of Generators 7.8 Kilowatts.

The amount of Fee ...	£	:	:	When applied for,
				19
Travelling Expenses (if any) £	:	:	:	When received,
				19

T.H. Noël and P.V. Baeyen
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 24 FEB 1953

Assigned