

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Writing Report 7th January 1953 When handed in at Local Office 10 Port of DURBAN. Received at London Office

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. - Port belonging to LONDON.

BRITISH MINISTRY OF TRANSPORT. Electric Light Installation fitted by NOT KNOWN. Contract No. - When fitted 1939.

System of Distribution TWO WIRE INSULATED. Nature of supply for Lighting 115 volts, Heating - volts, Power - volts.

System of Alternating Current, Lighting DIRECT. Power -

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 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

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

Position 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

Are generators 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

Air axes of rotation fore and aft YES. 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 -

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

Are switchboards 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 -

Are switchboards constructed wholly of durable, non-ignitable non-absorbent materials YES, is all insulation of high dielectric strength and of sufficiently high insulation resistance YES, if semi-insulating material is used, are all conducting parts insulated from the slab mica or mica-nite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework -

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

Are there 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 LAMP SWITCHES WITH A FUSE ON EACH POLE. FOR THE MAIN SWITCH AND FOR EACH OUT-

GOING CIRCUIT. Instruments on main switchboard ONE ammeters ONE voltmeters - synchronising device for paralleling purposes.

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.

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

Are boxes, sections and distribution boards, is the construction, protection, insulation, material, and position of these as per rule 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.
...	ONE	7.8	115	114.	600	VERTICAL Single Cyl. STEAM ENGINE.	/	/
AUXILIARY	NONE							
GENCY	NONE							
BY								
FORMER								

LIGHTING AND HEATING CONDUCTORS.

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...	2.	.361	19	.16	10'0"	10'-0"	V. I. R.	LEAD COVERED
EQUALISER CONNECTIONS	-	-	-	-	-	-	-	-
AUXILIARY GENERATOR	-	-	-	-	-	-	-	-
EMERGENCY GENERATOR	-	-	-	-	-	-	-	-
ROTARY TRANSFORMER...	-	-	-	-	-	-	-	-
AUXILIARY SWITCHBOARDS	-	-	-	-	-	-	-	-
ENGINE ROOM	2.	.007	7	.036	30	40'-0"	V. I. R.	LEAD COVERED
BOILER ROOM	2.	.007	7	.036	30	60'-0"	V. I. R.	LEAD COVERED
ACCOMMODATION FORWARD.	2	.007	7	.036	30	60'-0"	V. I. R.	LEAD COVERED
" AFT.	2	.007	7	.036	30	60'-0"	V. I. R.	LEAD COVERED
WIRELESS ROOM AND MESS ROOM	2	.007	7	.036	30	30'-0"	V. I. R.	LEAD COVERED
SHORE SUPPLY	2	.007	7	.036	30	20'-0"	V. I. R.	LEAD COVERED
WIRELESS	2	.007	7	.036	30	30'-0"	V. I. R.	LEAD COVERED
SEARCHLIGHT	-	-	-	-	-	-	-	-
MASTHEAD LIGHT...	2	.007	3	.036	5	-	V. I. R.	LEAD COVERED
SIDE LIGHTS	2	.007	3	.036	5	-	V. I. R.	LEAD COVERED
COMPASS LIGHTS	2	.003	3	.036	5	-	V. I. R.	LEAD COVERED
POOP LIGHTS	-	-	-	-	-	-	-	-
CARGO LIGHTS	-	-	-	-	-	-	-	-
ARC LAMPS	-	-	-	-	-	-	-	-
HEATERS	-	-	-	-	-	-	-	-

MOTOR CONDUCTORS.

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								

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 DRAWN STEEL TUBE WHICH PASSES THROUGH 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 -

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 - Amperes - 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* if 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.J. Baeyen
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 24 FEB 1953

Assigned

Im. 228.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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