

REPORT ON ELECTRIC FITTINGS

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office *6 FEB 1926*

Date of writing Report *20-2-1926* When handed in at Local Office *25-2-1926* Port of *MIDDLESBROUGH*

No. in Survey held at *HAVERTON HILL-ON-TEES* Date, First Survey *14-9-25* Last Survey *18-2-1926*
Reg. Book. (Number of Visits... *20*)

37962 on the MOTOR VESSEL "ATHELPRINCE"

Tons { Gross *8875*
Net *5225*

Built at *HAVERTON HILL-ON-TEES* By whom built *FURNESS SHIP BLDG Co LP* Yard No. *85* When built *1926*

Owners *BRITISH MOLASSES CO. LD.* Port belonging to *LIVERPOOL*

Electric Light Installation fitted by *FURNESS SHIPBUILDING Co LP* Contract No. *85* When fitted *1926*

System of Distribution *DOUBLE WIRE INSULATED*

Pressure of supply for Lighting *110* volts, Heating *-* 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 overload *YES*, are they compound wound *YES*

are they over compounded 5 per cent. *LEVEL*, 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 *YES*

Are all terminals accessible and clearly marked *YES*, are they so spaced or shielded that they cannot be accidentally earthed, or short circuited *YES*

Are the lubricating arrangements of the generators as per Rule *YES*

Position of Generators *FORWARD END OF MACHINERY SPACE*

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 axis 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 *FORWARD END OF MACHINERY SPACE NEAR GENERATORS*

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, incombustible 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 connected to one pole insulated from the slab with mica or micaite and the slab similarly insulated from its framework *YES*

and is the frame effectively earthed *YES* Are the following fittings as per Rule, viz.:— spacing or shielding of live parts *YES*

YES, accessibility of all parts *YES*, absence of fuses on back of board *YES*, proportion of omnibus bars *YES*

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 *D.P. SWITCH & FUSE & SET*

OF BUS BARS FOR EACH GENERATOR, WITH DP CHANGE-OVER SWITCHES TO EACH OUTGOING CIRCUIT

REMOVABLE "Z" TYPE FUSES

Instruments on main switchboard *2* 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 *FOR EACH GENERATOR*

2-10WATT LAMPS IN SERIES & MIDDLE POINT EARTHED

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

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



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W1643-0056 (1/2)
Foundation

Insulation of Cables, state type of cables, single or twin BOTH are the cables insulated and protected as per Tables III or IV of the Rules III

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 3.5 VOLTS

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 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 MAIN FEEDER CABLES ARE RUN ALONG THE UNDERSIDE OF FORE & AFT GANGWAY IN GALV IRON PIPING. ALL CABLES WHICH ARE EXPOSED ARE L.C. ARM & BRAID²

Support and Protection of Cables, state how the cables are supported and protected LEAD COVERED & ARMOURD CABLES ARE SUPPORTED BY MEANS OF GALV IRON CLIPS. LEAD COVERED CABLES SUPPORTED BY MEANS OF 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 VI YES

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

Joints in Cables, state if any, and how made, insulated, and protected PORCELAIN JUNCTION BOXES PROTECTED BY C.I. COVERS

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 Positions, 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 20 KWT. DYNAMO 1000
SWITCH BOARD 1000 10 " " 04
are their connections made as per Rule YES

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, are separate screens provided for the use of oil and electric side lights YES
are separate oil lanterns provided for the mast head lights and side lights YES

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 —
are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected —

IN PUMP ROOMS SPECIAL GAS-TIGHT FITTINGS, how are the cables led THROUGH TUBING
where are the controlling switches situated OUTSIDE PUMP ROOM ENTRANCES

Searchlight Lamps, No. of 1, whether fixed or portable PORTABLE, are their fittings as per Rule YES

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 axis of rotation fore and aft NO
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 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 YES
If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office 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	20	110	182	320	SUND FORGE OPEN TYPE ENGINE		
AUXILIARY	1	10	110	91	375			
EMERGENCY								
ROTARY TRANSFORMER								

LIGHTING AND HEATING CONDUCTORS.

Ref. 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.				
30475	MAIN GENERATOR...	2	2000	37	083	2445	60'	V.I.R	LEAD COV ² & BRAID ²
A.13	AUXILIARY GENERATOR	2	1000	19	083		54'	V.I.R	" " "
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	MOTOR ENGINE ROOM	2	0070	7	036	25	36	V.I.R	LEAD COV ² ARM ² & BRAID ²
	Boiler-Room								
	ENGINEERS ACCOM	2	0100	7	044	23	200	"	" " "
	OFFICERS	2	0400	19	052	32	400	"	" " "
	CREW	2	0100	7	044	11	800	"	" " "
	NAVIGATION INST	2	0100	7	044	10.6	500	"	" " "
	WIRELESS	2	0100	7	044	12	850	V.I.R	LEAD COV ² ARM ² & BRAID ²
	SEARCHLIGHT	2	0400	19	052	60	900	"	" " "
	MASTHEAD LIGHT... MAIN	2	0030	3	036	9	460	"	" " "
	SIDE LIGHTS	2	0020	3	029	9	90	"	LEAD COVERED
	COMPASS LIGHTS	2	0020	3	029	1	30	"	" " "
	STEER PROOF LIGHTS	2	0030	3	036	1.1	730	"	LEAD COV ² ARM ² & BRAID ²
	CARGO LIGHTS	2	0070	7	036	19	400	"	" " "
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. 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								
41505	WORKSHOP MOTOR	1	0100	7	044	16	60'	V.I.R	LEAD COV ² ARM ² & BRAID ²
B.7927	CENTRIFUGE	1	0100	7	044	16	180'	"	" " "
B.7258	"	1	0100	7	044	16	"	"	" " "

1109

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.

FOR FURNESS SHIPBUILDING CO. LIMITED

P.S. Glover Electrical Engineers.

Date 24th FEB 1926

COMPASSES.

Distance between electric generators or motors and standard compass 220' APPROX

Distance between electric generators or motors and steering compass 210' 00

The nearest cables to the compasses are as follows:—

A cable carrying 1 Ampères 4 feet from standard compass 4 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 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 FURNESS SHIPBUILDING CO. LTD

J.M. Glover DIRECTOR.

Builder's Signature.

Date 24th FEB 1926

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 in accordance with the Rules: is of good material and workmanship and on completion was examined under full load and found satisfactory.

Free Light.
3/3/26.

Im. 9.24.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

Total Capacity of Generators 30 Kilowatts

The amount of Fee ... £ 22 : 10 - 22.2.19.25

Travelling Expenses (if any) £ : : 1/4/26

W.H. Roberts
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned



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