

Rpt. 13.

No. 13407

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 24. 8. 1928 When handed in at Local Office 24. 8. 1928 Port of Middlesbrough

No. in Survey held at Haverton Hill-on-Tees Date, First Survey 3rd May Last Survey 13-8-1928
Reg. Book. (Number of Visits.....) 12

72333 on the M. F. Gulphawk Tons { Gross 10843
Net 6360

Built at Haverton Hill on Tees By whom built Furness Shipbuilding Co Ltd Yard No. 123 When built 1928

Owners Gulf Refining Co Port belonging to Pittsburgh P. A.

Electric Light Installation fitted by Furness Shipbuilding Co Ltd Contract No. 123 When fitted 1928

System of Distribution Double Wire
Pressure of supply for Lighting 110 volts, Heating - volts, Power 220 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. yes, if not compound wound state distance between each generator -

Where more than one generator is fitted are they arranged to run in parallel yes, 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

Position of Generators Forward end of Machinery Space
Are the lubricating arrangements of the generators as per Rule yes

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 -
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
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 micanite 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, 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

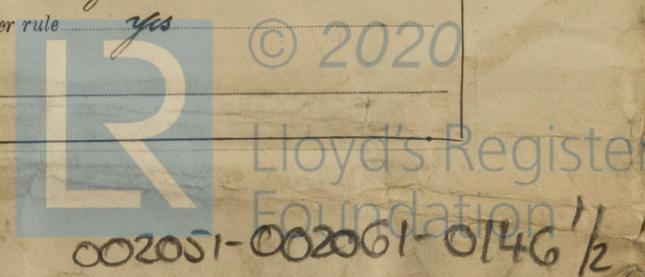
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Triple pole circuit Breaker for each Generator, Double pole switch & fuses for each outgoing circuit: cartridge type fuses

Instruments on main switchboard 9 ammeters 4 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 2-10 watt 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



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 4 V.

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 yes

Support and Protection of Cables, state how the cables are supported and protected Lead covered armoured cables are supported on perforated steel flanging by 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 in brass cases

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 All 220 volt circuits are fitted with earthing connections 50% in area of main cables
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 light fittings through galv conduit tubes
where are the controlling switches situated Outside pump room entrance

Searchlight Lamps, No. of 1, whether fixed or portable Fixed, 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 _____
are they protected from mechanical injury and damage from water, steam or oil yes are their axis 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 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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	90	220	409	300	3 CYC. 4-5 C. S. A. M. A. N. Oil Engine	Diesel Oil	Above 150° F.
AUXILIARY MAIN	1	35	220	159	420	Indolosa Type Engine (Sundaland 776)		
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 Amps.	Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
2	MAIN GENERATOR	2	3000	61	.103	409	35'	Varnished	Lead covered.
1	AUXILIARY GENERATOR	2	1000	19	.083	159	50'	Kambric	armoured & braided.
	SAVING CONNECTIONS	1	2500	37	.093	-	35'		
	SAVING CONNECTIONS	1	2500	37	.093	-	35'		
	SAVING CONNECTIONS	1	2500	37	.093	-	35'		
	SAVING CONNECTIONS	1	2500	37	.093	-	35'		
	ENGINE ROOM MOTOR	2	.0225	7	.064	44.3	25'		
	BOILER ROOM	2	.0225	7	.064	3.4	700'		
	NAVIGATION INST	2	.0225	7	.064	30.0	620'	V. I. R.	Lead covered.
	MIDSHIP ACCOMMODATION	2	.0400	19	.052	18.0	800'		armoured & braided
	FRD ACCOM & PUMP ROOM	2	.0400	19	.052	27.5	230'		
	CREW ACCOMMODATION	2	.0400	19	.052	29.5	200'		
	ENGINEERS ACCOMM	2	.0400	19	.052	29.5	200'		
	WIRELESS	2	.0100	7	.044	6.0	620'		Lead covered
	SEARCHLIGHT	2	.0100	7	.044	5.0	750'		armoured & braided
	MASTHEAD LIGHT	2	.0030	3	.036	9	400'	V. I. R.	
	SIDE LIGHTS	2	.0020	3	.029	9	100'		Lead covered
	COMPASS LIGHTS	2	.0020	3	.029	1	30'		and braided
	DECK LIGHTS	2	.0030	3	.036	9	750'		Lead covered
	CARGO LIGHTS	2	.0020	3	.029	27.2	300'		armoured & braided

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current Amps.	Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP	1	.0100	7	.044	18.0	200'		
	MAIN BILGE LINE PUMPS	1	.0100	7	.044	18.0	200'		
	GENERAL SERVICE PUMP	1	.1000	19	.083	18.0	200'		
	EMERGENCY BILGE PUMP	1	.0100	7	.044	32.0	220'		
	SANITARY PUMP	1	.0100	7	.044	97.0	210'		
	CIRC. SEA WATER PUMPS	1	.0400	19	.052	97.0	220'	Varnished	Lead covered.
	CIRC. FRESH WATER PUMPS	2	.0400	19	.052	97.0	220'	Kambric	armoured & braided
Aux	AIR COMPRESSOR	1	.2500	37	.093	277.0	235'		
	FRESH WATER PUMP	1	.0400	19	.052	97.0	230'		
	ENGINE TURNING GEAR	1	.0225	7	.064	77.0	200'		
	ENGINE REVERSING GEAR	1	.0100	7	.044	28.0	250'		
	LUBRICATING OIL PUMPS	1	.0100	7	.044	18.0	210'		
	OIL FUEL TRANSFER PUMP	1	.0100	7	.044	18.0	210'		
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR	2	.0600	19	.064	45.0	430'		
	WORKSHOP MOTOR	1	.0100	7	.044	28.0	320'		
	VENTILATING FANS								
	Aux OIL FUEL PUMP	1	.0400	19	.052	97.0	200'		
	REFRIG	1	.0100	7	.044	21.0	320'		
	6-TON CRANE	1	.0100	7	.044	11.0	260'		
	CENTRIFUGE	1	.0100	7	.044	11.0	260'		
	OIL PRIMING PUMP	1	.0030	3	.036	5.0	100'		

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. G. Plover

Electrical Engineers.

Date *22nd Aug 1928*

COMPASSES.

Distance between electric generators or motors and standard compass *250'*
 Distance between electric generators or motors and steering compass *240'*
 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. Goveru

Builder's Signature.

Date *22nd Aug 1928*

Is this installation a duplicate of a previous case *Yes*. If so, state name of vessel *"Gulfbird"*

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

*The materials and workmanship are good.
 This electric installation has been fitted aboard under special survey in accordance with the Rules and is, in my opinion, suitable for a classed vessel.
 It has been tested under working conditions with satisfactory results.*

It is submitted that this vessel is eligible for THE RECORD.

Elec Light

J.M.

28/8/28

Total Capacity of Generators *215* - Kilowatts

The amount of Fee ... £ *36-17-6* When applied for, *15/8/1928*

Travelling Expenses (if any): £ : : When received, *17/8/1928*

M. Man

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *Elec Light*

1m. 822.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



© 2020

Lloyd's Register Foundation