

Rpt. 13

No. 40622

**REPORT ON ELECTRIC FITTINGS.**

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office... 25 FEB 1930

Date of writing Report

N.Y. 30

When handed in at Local Office

N.Y. Feb. 30

Port of

HULL

No. in Survey held at

Goole.

Date, First Survey

3 Feb

Last Survey

10 Feb 1930.

Reg. Book.

40622 on the

HOLME FORCE

(Number of Visits.....)

Tons

Gross

Net

Built at

Goole

By whom built

Goole Shipbuilding &amp; Engineering Co

Yard No. 286

When built 1929.

Owners

Port belonging to

Whitehaven.

Electric Light Installation fitted by Campbell &amp; Johnson, Ltd

Contract No.

When fitted 1929-30.

Is the Vessel fitted for carrying Petroleum in bulk

no.

System of Distribution

Double wire loop in system.

Pressure of supply for Lighting

110

volts, Heating

no Heating

volts, Power

no Power

volts.

Direct or Alternating Current, Lighting

Direct

Power

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

, 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

After end of top grating in 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

4 ft.

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

After Engine Room Bulkhead on top grating.

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

3 ft.

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 1 Main 75 amp

D.P. chopper Switch &amp; Main D.P. 75 amp Porcelain replacement type fuses

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 lamps

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



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8830-1  
Cables: Single, twin, concentric, or multicore *Single & Twin* are the cables insulated and protected as per Tables IV or V of the Rules *IV*  
Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *3*  
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  
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 *galvanised clips & 3/8" cap bolts on iron work & brass clips & screws on wood-work. Lead covered Armoured & Braided, & lead covered.*  
If cables are run in wood casings, are the casings and caps secured by screws *Yes*, are the cap screws of brass *Yes*, are the cables run in separate grooves *Yes*. 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 *no joints*  
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 *Yes*  
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 *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 lights in cargo spaces*, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *none fitted*, how are the cables led where are the controlling switches situated  
Searchlight Lamps, No. of *1*, whether fixed or portable *portable*, are their fittings as per Rule  
Arc Lamps, other than searchlight lamps, No. of *0*, are their live parts insulated from the frame or case *Yes*, 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 *Yes*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *4 ft* and *4 ft*  
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  
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	6	110	54	400	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 ...	2	.04	19	.052	54	64	12'-0" 12'-0"	Rubber	L.C.A+B.	
EQUALISER CONNECTIONS										
AUXILIARY GENERATOR...										
EMERGENCY GENERATOR										
ROTARY TRANSFORMER	MOTOR GENERATOR									
ENGINE ROOM...										
BOILER ROOM...										
AUXILIARY SWITCHBOARDS										
Engine Room & Storehouse	2	.0045	7	.029	7	18-2	12'-0" 12'-0"	Rubber	L.C.A+B.	
ACCOMMODATION										
AFT	2	.0045	7	.029	5	18-2	30'-0" 30'-0"	Rubber	L.C.A+B.	
SALOON	2	.0045	7	.029	8	18-2	160'-0" 160'-0"	Rubber	L.C.A+B.	
FORWARD	2	.003	3	.036	5	12	153'-0" 153'-0"	Rubber	L.C.A+B.	
NAVIGATION	2	.0045	7	.029	7	18-2	166'-0" 166'-0"	Rubber	L.C.A+B.	
WIRELESS										
SEARCHLIGHT										
MASTHEAD LIGHT	2	.003	3	.036	.54	12	172'-0" 172'-0"	Rubber	L.C.A+B.	
SIDE LIGHTS	each	2	.003	3	.036	.54	12	40'-0" 40'-0"	Rubber	L.C.
COMPASS LIGHTS	2	.003	3	.036	.4	12	30'-0" 30'-0"	Rubber	L.C.	
POOP LIGHTS	2	.003	3	.036	.54	12	180'-0" 180'-0"	Rubber	L.C.A+B.	
CARGO LIGHTS	2	.0045	7	.029	11	18-2	166'-0" 166'-0"	Rubber	L.C.A+B.	
ARC LAMPS										
HEATERS										
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										
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.

CAMPBELL & ISHERWOOD LTD.

T. R. Drake

Electrical Engineers. Date 13/2/30

COMPASSES.

Distance between electric generators or motors and standard compass 123 ft (approximately)  
Distance between electric generators or motors and steering compass 170 ft (approximately)  
The nearest cables to the compasses are as follows:—  
A cable carrying 11 Ampères feet from standard compass 12 feet from steering compass.  
A cable carrying 8 Ampères feet from standard compass 12 feet from steering compass.  
A cable carrying 4 Ampères feet from standard compass 3 feet from steering compass.  
Have the compasses been adjusted with and without the electric installation at work at full power 1/2  
Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted 1/2  
The maximum deviation due to electric currents was found to be 40 degrees on any course in the case of the standard compass, and 40 degrees on any course in the case of the steering compass.

R. J. J. J.

Builder's Signature. Date

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. The electrical installation of this vessel has been fitted on board under special survey & the materials & workmanship are found good. It has been satisfactorily fitted on board, tried under working conditions & found in good order. It is eligible in my opinion to have record of Electric Light.

It is submitted that this vessel is eligible for THE RECORD. Elec. Light  
J. H. J. 27/2/30

Total Capacity of Generators 6 Kilowatts.

The amount of Fee ... £ 6 : 0 : When applied for, 7/7/30

Travelling Expenses (if any) £ : : When received, 13/3/30

John Shackleton  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned Elec Lt.

Im. 1228—Transfer.  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

