

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) Received at London Office 25 AUG 1926

Date of writing Report 12.8.1926. When handed in at Local Office 20.8.26.10 Port of GLASSGOW.

No. in Survey held at GREENOCK. Date, First Survey 21<sup>st</sup> May Last Survey 5<sup>th</sup> Aug 1926  
 Reg. Book. (Number of Visits.....2.....)

90466 on the S.S. "PASS OF MELFORT" Tons { Gross 408  
 Net

Built at GLASSGOW. By whom built THE BLYTHSWOOD, S.B.C. Yard No. 12. When built 1926.

Owners THE BULK OIL S.S. CO LTD Port belonging to LONDON.

Electric Light Installation fitted by THE SUNDERLAND FORGE & ENG CO Contract No. 12. When fitted 1926.

System of Distribution DOUBLE WIRE ✓

Pressure of supply for Lighting 110 ✓ volts, Heating — volts, 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 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 —, is an adjustable regulating resistance fitted in series with each shunt field —

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 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 — 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 IN ENGINE ROOM.

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. DOUBLE POLE SWITCH & FUSES FOR GENERATOR AND EACH OUTGOING CIRCUIT.

Instruments on main switchboard / ammeters / 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 LAMP, SWITCH & FUSE ON EACH POLE.

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 SINGLE & TWIN are the cables insulated and protected as per Tables III or IV of the Rules YES

**Fail of Pressure**, state maximum between bus bars and any point of the installation under maximum load 4.5 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 YES.

**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 MAINS- LEAD COVERED & BRAIDED CABLES IN GALV IRON PIPE.

**ACCOMMODATION- LEAD COVERED & BRAIDED CABLES. MACHINERY SPACES- LEAD COVERED ARMoured & BRAIDED WITH GALV IRON CLIPS.**

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 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 NONE MADE.

**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 YES.

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 YES.

**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 sloshholds 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 YES.

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected SPECIAL CABT / ROOM.

**GAS TIGHT PUMP ROOM FITTINGS.** how are the cables led OUTSIDE PUMP ROOMS IN GALV IRON TUBING.

where are the controlling switches situated OUTSIDE PUMP ROOMS.

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

**Are Lamps**, other than searchlight lamps, No. of 1, are their live parts insulated from the frame or case YES, are their fittings as per Rule YES.

**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 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 YES and YES.

**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	3 1/2	110	31.7	350	SINGLE CYLINDER STEAM ENGINE		
AUXILIARY								
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. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	2	.02214	✓	.064	31.7	30	V.I.R.	LEAD COVERED & BRAIDED.
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.00455	✓	.029	5.1	20	V.I.R.	LEAD COVERED & BRAIDED.
	BOILER ROOM	2	.01462	✓	.052	9.9	90	V.I.R.	LEAD COVERED & BRAIDED IN GALV IRON PIPE.
	ACCOMMODATION	2	.00455	✓	.029	6.7	260	V.I.R.	LEAD COVERED & BRAIDED IN GALV IRON PIPE.
	NAVIGATION.	2	.00455	✓	.029				
	WIRELESS								
	SEARCHLIGHT								
	MASTHEAD LIGHT...	2	.00322	✓	.064	5.4	320	V.I.R.	LEAD COVERED & BRAIDED IN GALV IRON PIPE.
	SIDE LIGHTS	2	.00194	✓	.029	5.4	60	V.I.R.	LEAD COVERED & BRAIDED
	COMPASS LIGHTS	2	.00194	✓	.029	2	20	V.I.R.	LEAD COVERED & BRAIDED.
	POOP LIGHTS								
	CARGO LIGHTS								
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	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								
	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.

p. pro. THE SUNDERLAND FORGE & ENG. CO. LIMITED. Electrical Engineers. Date 17th Aug. 1926.  
 10. Park per Her.

COMPASSES.

Distance between electric generators or motors and standard compass 68 FEET  
 Distance between electric generators or motors and steering compass 64 FEET.

The nearest cables to the compasses are as follows:—

A cable carrying 6.7 Ampères 10 feet from standard compass 10 feet from steering compass.

A cable carrying .2 Ampères 10 feet from standard compass LED INTO feet from steering compass.

A cable carrying .2 Ampères LED INTO feet from standard compass 10 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 any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

PLYTHWOOD SHIPBUILDING CO., LTD.

James S. C. Halliday Builder's Signature. Date 20 Aug 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 on board under special survey, tested under full working conditions and found satisfactory in every way. The workmanship was found to be good and sound.

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

J. S. Rankin  
 26/8/26

Total Capacity of Generators 3.5 Kilowatts

The amount of Fee ... £ 5.0.0 : 16.8.26 When applied for.

Travelling Expenses (if any) £ 10/6 : 20.8.26 When received.  
h.m.s.

J. S. Rankin  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 24 AUG 1926

Assigned Elec. Light

W.M.

a.b.  
21/8/26

Im. 11. 24. — Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



© 2021 Lloyd's Register Foundation