

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

5 SEP 1928

Date of writing Report 24.8.28 When handed in at Local Office 30.8.28 Port of GLASGOW Greenock

No. in Survey held at GREENOCK Date, First Survey 31.1.28 Last Survey 29.8.1928
Reg. Book. 6646 on the M. V. BRUNSWICK (Number of Vests 28)

Built at GREENOCK By whom built SCOTTS S & E. CO. Yard No. 534 When built 1928

Owners ATLANTIC REFINING CO. Port belonging to PANAMA.

Electric ~~fitting~~ Installation fitted by SCOTTS S & E. CO. Contract No. 534 When fitted 1928.

System of Distribution TWO WIRE, DIRECT

Pressure of supply for Lighting — volts, Heating — volts, Power 1000 volts.

Direct or Alternating Current, Lighting 270V ON 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

Generators, do they comply with the requirements regarding rating YES, are they compound wound NO. SHUNT.

are they over compounded 5 per cent. —, if not compound wound state distance between each generator 3 FEET & 2 FEET

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, clearly marked, and furnished with sockets YES, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched YES

Position of Generators BOTTOM PLATFORM, MAIN ENGINE ROOM, 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 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 ON SPECIAL FLAT IN MAIN 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, 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 —, 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

SEE SEPARATE REPORT.

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

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

Joint Boxes Section and Distribution Boards, state the construction, protection, insulation, material, and position of these as per rule

SEE LIGHTING REPORT.



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003038-003045-0064

Cables: Single, twin, concentric, or multicore **SINGLE & TWIN** are the cables insulated and protected as per Tables IV or V of the Rules **No. Cambrig L.C. & A.**

7000 VOLT SURE, 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 **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 **IN ANGLE IRON STRONGBACKS**

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 **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 state the material of which the bushes are made

Earthing Connections, state what earthing connections are fitted and their respective sectional area **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, controlled by separate switch and fuse, are the fuses double pole, are the switches and fuses grouped in a position accessible only to the officers on watch **YES**

Secondary Batteries, are they constructed and fitted as per Rule **ON SPECIAL PLATFORM IN MAIN ENGINE ROOM**

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight 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 **YES**

where are the controlling switches situated **YES**

Searchlight Lamps, No. of, whether fixed or 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 **YES**

Motors, are their working parts readily accessible, 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 **YES**

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, fire 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 **SEE SEPARATE REPORT**

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule **SEE**

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule **SEE**

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 **SEE**

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office **SEE**

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR	No of	RATED AT			Revs. per Min.	DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.			Fuel Used.	Flash Point of Fuel.
MAIN	4	600	250	2400	225	CARELS DIESEL ENG.	DIESEL OIL ABOVE 150°F	
Exciter	4	75	250	300	225	DR DR		

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors per Core.	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 GENERATORS	4	0.7435	91	.103"	2400	60	CAMBRIG	L.C. & A.
	Exciter Generators	1	0.3024	37	.103"	300	60	"	"
	MAIN MOTOR (DOUBLE UNIT MOTOR)	4	0.7435	91	.103"	2230	60	"	"
	WIRELESS								
	SEARCHLIGHT								
	MASTHEAD LIGHT								
	SIDE LIGHTS								
	COMPASS LIGHTS								
	POOP LIGHTS								
	CARGO LIGHTS								
	ARC LAMPS								
	HEADLAMP								

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								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR								
	WORKSHOP MOTOR								
	VENTILATING FANS								

SEE LIGHTING REPORT

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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.

SCOTT'S SHIPBUILDING & ENGINEERING COMPANY, LIMITED

Allyn
ELECTRICAL MANAGER

Electrical Engineers.

Date

28/8/28

COMPASSES.

Distance between electric generators or motors and standard compass

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying Ampères feet from standard compass 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

Has the effect of switching on and off circuit breakers 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.

LIGHTING REPORT
SEE

SCOTT'S SHIPBUILDING & ENGINEERING COMPANY, LIMITED

A. Hutchison
Director

Builder's Signature.

Date

Is this installation a duplicate of a previous case If so, state name of vessel

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

The main electrical propulsion plant (London Regt No. C 5046) has been built under special survey & is now securely fitted on board. This report accompanies that of the Machinery.

Total Capacity of Generators Kilowatts.

The amount of Fee ... £ : :
When applied for, 19
Travelling Expenses (if any) £ : :
When received, 19

W. Gordon Mielum & J. Rankin
Surveyors to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 4 - SEP 1928

Assigned See Greenock Report No. 18952

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



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