

Rpt. 13.

No. 18952

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

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 East Survey 29.8.1928
Reg. Book. 66346 on the "M.V. BRUNSWICK" (Number of Visits 22)

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 Light Installation fitted by SCOTTS S. & E. CO Contract No. 534 When fitted 1928

System of Distribution TWO WIRE POWER THREE WIRE LIGHTING

Pressure of supply for Lighting 125 volts, Heating — volts, Power 250 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 —

Generators, do they comply with the requirements regarding rating YES, are they compound wound MAIN - SHUNT AUX - COMPOUND.

are they over compounded 5 per cent. —, if not compound wound state distance between each generator 3 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 Are the lubricating arrangements of the generators as per Rule YES

Position of Generators BOTTOM PLATFORM MAIN 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 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 —

Instruments on main switchboard — ammeters — voltmeters — synchronising device for paralleling purposes. —

Earth Testing, are 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 Rules YES

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

SEE SEPARATE REPORT



003038-003045-0068

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

Fall of Pressure, 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.

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.

Support and Protection of Cables, state how the cables are supported and protected **IN ANGLE IRON STRONG BACKS, ON TRAYS**

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.

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

Joints in Cables, state of any, and how made, insulated, and protected.

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands.

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas.

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule.

Auxiliary Supply, state position and method of control of the auxiliary supply and how the generator is driven **IN ENGINE ROOM - OIL ENGINE**

Navigation Lamps, are these separately wired, controlled by separate switch and separate fuses, are the fuses double pole, are the switches and fuses grouped in a position accessible only to the officers on watch.

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, 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.

where are the controlling switches situated **IN ENGINE ROOM**

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

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, 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.

are they protected from mechanical injury and damage from water, steam or oil, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe enclosed, 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 **SEPARATE**

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

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

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.

GENERATOR	No. of	RATED AT				WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE	Fuel Used.	Flash Point of Fuel.
		Kilowatts.	Volts.	Ampères.	Revs. per Min.			
MAIN	4	600	250	2400	225	CARELS DIESEL ENGINES	DIESEL OIL	ABOVE 150° F
AUXILIARY	1	35	250	140	450	DE	DE	DE

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors Per B&E	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	4	0.7435	91	.103"	2400	60	CAMBRIC	L.C. & A.
	AUXILIARY GENERATOR	1	.1	19	.083"	140	90	"	"
	ENGINE ROOM	1	.003	3	.036"	12	20	"	"
	ACCOMMODATION	1	.007	7	.036"	16	60	"	"
	FORWARD POWER	1	.3	37	.103"	212	600	"	"
	WIRELESS	1	.01	7	.044"	10	130	CAMBRIC	L.C. & A.
	SEARCHLIGHT		.003	3	.036"	8	60	"	"
	MASTHEAD LIGHT		.003	3	.036"	5	360	"	"
	SIDE LIGHTS	1	.003	3	.036"	5	16	"	"
	COMPASS LIGHTS	1	.003	3	.036"	5	20	"	"
	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	3	.0225	7	.064"	28	60	CAMBRIC	L.C. & A.
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP	1	.007	7	.036"	11.2	60	"	"
	CIRC. SEA WATER PUMPS	2	.04	19	.052"	52.5	75	"	"
	CIRC. FRESH WATER PUMPS	1	.003	3	.036"	7.6	50	"	"
	AIR COMPRESSOR	2	.04	19	.052"	51.8	60	"	"
	FRESH WATER PUMP								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP	2	.003	3	.036"	7.8	90	CAMBRIC	L.C. & A.
	WINDLASS	1	.12	37	.064"	81.2	90	"	"
	WINCHES, FORWARD	1	.0225	7	.064"	34.2	100	"	"
	WINCHES, AFT	1	.0145	7	.052"	34.2	120	"	"
	STEERING GEAR								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR	1	.04	19	.052"	15	140	CAMBRIC	"
	WORKSHOP MOTOR	1	.01	7	.044"	19	50	"	"
	VENTILATING FANS	1	.04	19	.052"	45	40	"	"
	CARGO PUMPS	3	.3	37	.103"	86.5	180	"	"
	FIRE	1	.15	19	.072"	101.5	150	"	"
	BOILER FEED PUMP	1	.003	3	.036"	4.5	90	"	"
	CENTRIFUGES	2	.003	3	.036"	12.5	30	"	"
	ICE MACHINE	1	.01	7	.044"	20	70	"	"
	OIL BURNER FAN	1	.003	3	.036"	5.9	20	"	"
	CAPSTAN	1	.12	37	.064"	173	200	"	"
	GYRO M/G	1	.0045	7	.029"	6	15	"	"
	GYRO MOTOR	1	.007	7	.036"	1.6	180	"	"



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.

Alkhan

ELECTRICAL MANAGER

Electrical Engineers.

Date

28/8/28

COMPASSES.

Distance between electric generators or motors and standard compass

70 FEET

Distance between electric generators or motors and steering compass

70

The nearest cables to the compasses are as follows:—

A cable carrying *.08* Ampères *IN* feet from standard compass _____ feet from steering compass.

A cable carrying *.8* Ampères *7* feet from standard compass _____ feet from steering compass.

A cable carrying *.5* Ampères *7* 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* course in the case of the standard

compass, and *NIL* degrees on *ALL* course in the case of the steering compass.

SCOTT'S SHIPBUILDING & ENGINEERING COMPANY, LIMITED.

A. H. Thomson

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.)

This installation has been fitted on board under special survey. Tested under full load conditions and found satisfactory. The materials and workmanship were found to be good and sound.

Total Capacity of Generators

Kilowatts.

The amount of Fee ... £ *127.5.0*

When applied for,

Travelling Expenses (if any) £ *2.2.0*

When received,

Surveyors to Lloyd's Register of Shipping.

J. Shauhin

Committee's Minute

GLASGOW 4 - SEP 1928

Assigned

Elec. Light

1m. 127.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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