

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 8 MAR 1928
Received at London Office

Date of writing Report - 7 MAR 1928 When handed in at Local Office - 7 MAR 1928 Port of **HULL**

No. in Survey held at **GOOLE** Date, First Survey **5 Jan** Last Survey **14 Feby 1928**
Reg. Book. **42319** on the **STEEL TWIN SCREW SCHOONER, "PUKEKO,"** (Number of Visits...)

Built at **GOOLE** By whom built **The Goole Shipbuilding & Repairing Coy. Ltd.** Yard No. **278** When built **1928**
Owners **Richardson & Coy. Ltd.** Port belonging to **NAPIER.** Tons { Gross **735.78**
Net **372.48**

Electric Light Installation fitted by **The Sunderland Forge Eng. Coy Ltd.** Contract No. When fitted **1928**

System of Distribution **2 wire** volts, Heating **110** volts, Power **110** volts.

Pressure of supply for Lighting **110** volts, Heating **110** volts, Power **Direct**

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 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**

Position of Generators **bottom platform aft.** 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** are the prime movers and their respective generators in metallic contact **yes**

Main Switch Boards, where placed **aft - engineers room bulkhead**

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 **✓**, 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**

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**

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 **D.P. switches**

✓ fuses for all outgoing circuits + generator

Instruments on main switchboard **one** ammeters **one** 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 in series with earth connection**

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**

Cables: Single, twin, concentric, or multicore *Single & twin* are the cables insulated and protected as per Tables IV or V of the Rules. *yes*

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 *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 *none*

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 *L.C. armoured cables with G.I. clips; lead covered cables with 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 VIII *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*

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 & fibre*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *through earth lamps*

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 *none*

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 *none fitted*

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensal 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 *gaslight fittings*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *gaslight*

how are the cables led *through pipes*

where are the controlling switches situated *saloon alleyway*

Searchlight Lamps, No. of *-*, whether fixed or portable *-*, 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 *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 *-*, 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 and fitted as per Rule *yes*

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.									
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	6	110	60	450	Steam				
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	.06	19	.064	60	15 feet	Lead & rubber	in pipe
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS...								
	ENGINE ROOM	2	.007	7	.036	5 1/2	10 feet	LB + AB	
	BOILER ROOM	2	.0019	3	.029	8 1/2	38 "	LB + AB	
	ACCOMMODATION	2	.0019	3	.029	8 1/2			
	WIRELESS	2	.0019	3	.029	10	80 feet	LB	in pipe
	SEARCHLIGHT	1	"	3	.029		100 feet	LB	in pipe
	MASTHEAD LIGHT...	2	"	3	.029		40 feet	LB	
	SIDE LIGHTS	2	"	3	.029		30 feet	LB	screwed to Deck.
	COMPASS LIGHTS	2	"	3	.029				
	POOP LIGHTS	2	"	3	.029	14.5	80 feet	LB	in Pipe
	CARGO LIGHTS	2	"	3	.029		80 feet	LB	in pipe.
	ARC LAMPS 300 WATT	2	"	3	.029				
	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.				
	BALAST 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								
	Refrigerating	1	.007	7	.036	10	30 feet	LB + AB	Enclosed Type

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.

Messrs The Sunderland Forge & Eng Co. Electrical Engineers. Date February 3rd 1928
R. J. Barber

COMPASSES.

Distance between electric generators or motors and standard compass 160 ft.
 Distance between electric generators or motors and steering compass 160 ft.
 The nearest cables to the compasses are as follows:—
 A cable carrying 1/5 Ampères 8 feet from standard compass 6 feet from steering compass.
 A cable carrying 1/6 Ampères 10 feet from standard compass 10 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 *no* degrees on *any* course in the case of the standard compass, and *no* degrees on *any* course in the case of the steering compass.

FOR THE GOOLE SHIPBUILDING & REPAIRING CO. (1927) LTD.

R. J. Barber Builder's Signature. Date 27 Feb 1928.

Joint Managing Director,

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 Electrical installation of this vessel has been fitted on board under special survey. The materials & workmanship are sound & good. The Plans- has been tried under full working conditions & found good. In my opinion it is eligible to have the record of Electric Light:

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

16/3/28

Total Capacity of Generators 6 Kilowatts.

The amount of Fee ... £ 6 : - : When applied for, 7 March 1928.

Travelling Expenses (if any) £ : : When received, 16.3.28

R. B. Grier

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

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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