

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 30 NOV 1929

Received at London Office.....

Date of writing Report 29-11-1929 When handed in at Local Office 29-11-1929 Port of Grimsby

No. in Survey held at Grimsby Date, First Survey 2<sup>nd</sup> MAY Last Survey 17<sup>th</sup> July 1929  
Reg. Book. (Number of Visits.....5.....)

10170 on the STEEL S.C.K. WARLORD Tons (Gross 226 Net 109)

Built at Beverley By whom built Cook, Wilton & Co. Ltd. No. When built 1914

Owners J. E. Harrison Port belonging to Grimsby

Electric Light Installation fitted by The Hunter Electrical Eng'g Co Contract No. When fitted 1929  
Last Report, No. 16352, Gms

System of Distribution Two wire & distribution boards

Pressure of supply for Lighting 100 Volts 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 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   Yes, 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 Sthd side of 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 Sthd side of 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  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  
Circuit breakers  
Main circuit controlled by S.P. switches & protected by fuses on each pole.

Instruments on main switchboard One ammeter One voltmeter  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



**Cables:** Single, twin, concentric, or multicore *Twin & Single* 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. *Nil*

**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. *No paper insulation*

**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. *Fastened with galvanised 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.

**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. *No unarmoured cables through beams*

**Earthing Connections,** state what earthing connections are fitted and their respective sectional areas. *Earthed through grounding through collection was fitted under main deck to upper compartments connections made as per Rule 101*

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

**Emergency Supply,** state position and method of control of the emergency supply and how the generator is driven. *Then vessel is required to have rotation of cable light entered in the R.B.*

**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. *Navigation lamps can be seen from bridge.*

**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*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected. *No*

how are the cables led

where are the controlling switches situated. *Yes*

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

**Arc Lamps,** other than searchlight lamps, No. of *2* 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 , are their axes of rotation fore and aft , 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 .

**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 ...	1	A.5	100	A5	A50	Steam engine	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	2	.02214	7	.064	450	12	Y.I.R.	
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.00152	1	.044	1.8	75	Y.I.R.	LCBA
	BOILER ROOM	2	.00152	1	.044	.6	50	"	"
	ACCOMMODATION	2	.00152	1	.044	.6	40	"	"
	" MAIN	2	.00299	3	.036	2.2	24	"	"
	WIRELESS								
	SEARCHLIGHT								
	MASTHEAD LIGHT...	2	.00152	1	.044	.6	220	Y.I.R.	LCBA
	SIDE LIGHTS	2	.00152	1	.044	.6	35	"	"
	COMPASS LIGHTS	2	.00152	1	.044	.6	14	"	"
	POOP LIGHTS	2	.00152	1	.044	.6	50	"	"
	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. Ampères.	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								

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.

The Humber Electrical Eng Co Electrical Engineers. Date \_\_\_\_\_  
 J. A. Gould. J. A. Gould.

COMPASSES.

Distance between electric generators or motors and standard compass 30'-0"  
 Distance between electric generators or motors and steering compass 25'-0"

The nearest cables to the compasses are as follows:—

A cable carrying 2.5 Ampères 8'-0" feet from standard compass 4'-6" feet from steering compass.

A cable carrying .6 Ampères 8'-0" feet from standard compass 4'-6" feet from steering compass.

A cable carrying .3 Ampères 8'-0" feet from standard compass 4'-6" 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 No effect

The maximum deviation due to electric currents was found to be Nil degrees on \_\_\_\_\_ course in the case of the standard compass, and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

J. A. Gould  
 The Humber Electrical Eng Co Builder's Signature. Date \_\_\_\_\_

Is this installation a duplicate of a previous case Yes If so, state name of vessel RELHAM SLK LORD SELBOURNE.8

General Remarks (State quality of workmanship, opinions as to class, &c. The materials and workmanship are good. The installation was fitted under survey & upon completion was tried under full working condition & found satisfactory. This vessel is eligible to have notation of Elec. light entered in the R.B.)

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

4/18/29

Total Capacity of Generators 4.5 Kilowatts.

The amount of Fee ... .. £ 3 : - : 20/11/29  
 Travelling Expenses (if any) £ : : 31.1.30

A. D. Daintith  
 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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