

Rpt. 13.

No. 15943

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

-1 MAR 1937

Date of writing Report 27. 2. 1937 When handed in at Local Office 27. 2. 1937 Port of MIDDLERSBROUGH
 No. in Survey held at SOUTH BANK Date, First Survey 6 Jan Last Survey 2 Feb 1937
 Reg. Book. "KELT" (Number of Visits 9)
 on the
 Built at South Bank By whom built Smiths Dock Co. Ltd. Yard No. 1020 When built 1937
 Owners Hull Northern Fishing Co. Ltd. Port belonging to Hull
 Electric Light Installation fitted by RICHARD PICKERSGILL & SONS, LTD. Contract No. When fitted 1937
 Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution

Pressure of supply for Lighting 100 volts, Heating — volts, Power — volts.

Direct or Alternating Current, Lighting Direct Current 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 temperature rise 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 Yes Have certificates of test results for machines under 100 kw. been submitted and approved 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 Starboard 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 No Main Switch Boards, where placed Starboard 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

is it of an approved type 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, is the non-hygroscopic insulating material of an approved

type 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 Yes, temperature rise of

omnibus bars —, individual fuses to voltmeter, pilot or earth lamp Yes, are moving parts of switches alive in the "off" position No, are all screws and nuts securing connections effectively locked Yes, are any fuses fitted on the live side of

switches Yes Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

Double Pole Main Switch & Double Pole Circuit Breakers & Double Pole

Are turbine driven generators fitted with emergency trip switch as per rule — Are cupboards or compartments containing switchboards composed of

fire-resisting material or lined with approved material — Instruments on main switchboard 1 ammeters 1

voltage meters — synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

2 Lamps in series across positive & negative to Earth Switches, Circuit Breakers and Fusible Cut-outs,

do these comply with the requirements of the Rules — are the fusible cutouts of an approved type Yes have the reversed

current protection devices been tested under working conditions

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

Cables: Single, twin, concentric, or multi-core are the cables insulated and protected as per Tables IV, V, X or XI of the Rules

If the cables are insulated otherwise than as per Rule, are they of an approved type

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load

Cable Sockets, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets

Paper Insulated and Varnished Cambric Insulated Cables, If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound, or waterproof insulating tape

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

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, are the cables and fittings in accordance with the special requirements

Joints in Cables, state if 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

are their connections made as per Rule

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

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven

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, has each navigation lamp an automatic indicator as per Rule

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

are all fittings suitably ventilated, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials

Heating and Cooking Appliances, are they constructed and fitted as per Rule, are air heaters constructed and fitted as per Rule

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, 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

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing

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, are all fuses of the filled cartridge type, are they of an approved type

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	1	8	100	80		Rotary Engine	Coal		
AUXILIARY									
EMERGENCY									
ROTARY TRANSFORMER									

GENERATOR, LIGHTING AND HEATING CONDUCTORS.									
DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.			
MAIN GENERATOR	2	.0600	19	.064	55	83	234	43R	Lard
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR									
ENGINE ROOM	2	.0090	7	.036	6	24	64	43R	Lard
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION	2	.0090	7	.036	8	24	44	43R	Lard
APARTMENT	2	.0030		.036	16	24	150		
DORMITORY	2	.0090		.036	6	12			
WATER TANK	2	.0090		.036	4	24	160	43R	Lard
WIRELESS	2	.0090		.036	15	24	150	43R	Lard
SEARCHLIGHT									
MASTHEAD LIGHT									
SIDE LIGHTS									
COMPASS LIGHTS									
POOP LIGHTS									
CARGO LIGHTS									
ARC LAMPS									
HEATERS									

MOTOR CONDUCTORS.										
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
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 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

RICHARD PICKERSGILL & SONS, LTD.

Electrical Engineers.

Date February 25th 1937

COMPASSES.

Distance between electric generators or motors and standard compass

60'

Distance between electric generators or motors and steering compass

55'

The nearest cables to the compasses are as follows:—

A cable carrying 50 Watts Amperes 5 feet from standard compass 0 feet from steering compass.

A cable carrying _____ Amperes _____ feet from standard compass _____ feet from steering compass.

A cable carrying _____ Amperes _____ feet from standard compass _____ feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power

Ye.

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

Ye.

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

FOR SMITH'S DOCK CO. LTD.

Builder's Signature.

Date 26th Feb 1937

Is this installation a duplicate of a previous case

Ye.

If so, state name of vessel

Bengali's previous holder of class.

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

The materials and workmanship are good.

This electric light installation has been fitted aboard under special survey and in accordance with the Rules. It has been tested under working conditions with satisfactory results and is, in my opinion, suitable for a classed vessel.

Total Capacity of Generators

8. Kilowatts.

The amount of Fee ...

£ 8-0-0

When applied for,

16.2 1937

Travelling Expenses (if any) £

:

When received,

2.4 1937 3/4

P. J. McA.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 2 MAR 1937

Assigned

See Indt 7E 15919



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Foundation