

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

18 APR 1934

Date of writing Report 2.7.31 When handed in at Local Office 19 Port of GLASGOW.

No. in Survey held at GREENOCK Date, First Survey 17th Sept. 1931 Last Survey 17th Sept. 1931
Reg. Book. 25204 on the M.V. "KARABAGH" (Number of Visits.....)

Tons { Gross 6426.63
Net 3862.93

Built at GLASGOW. By whom built GLYNSWOOD SHIPBUILDING CO. LTD No. 32 When built 1931

Owners BALTIC TRADING CO. LTD Port belonging to LONDON.

Electric Light Installation fitted by TROUP CURTIS & CO. LTD Contract No. 32 When fitted 1931

Is the Vessel fitted for carrying Petroleum in bulk YES.

System of Distribution Two Wire ✓

Pressure of supply for Lighting 110 volts, Heating — volts, Power 110 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 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 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 Engine Room Floor Port Side

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 In Engine Room adjacent to main Generators

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 Sindampo

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 200 amp D.P. main Switch and fuses for each Generator and D.P. Change-over Switches and fuses for each out-going circuit.

Instruments on main switchboard 2 ammeters 2 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 Two lamps in series with centre point earthed

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 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 4 volts

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 fitted

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 main cables along fore & aft gangway run on galvanneal conduit. Engine Room & Machinery Spaces L.C.A. Accommodation L.C.

If cables are run in wood casings, are the casings and caps secured by screws Yes, are the cap screws of brass Yes, are the cables run in separate grooves Yes. 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 None

Joints in Cables, state if any, and how made, insulated, and protected Three V.I.R. main cable joint L.C. and L.C.A. Cables in Engine Room and Pulpit special cast iron Link Boxes are fitted.

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.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas All metallic sheathing of cables efficiently bonded to earth by means of clips or glands.

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

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 Waterlight, Well Glass and guarded Pendants 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 Yes. Special Gaslight Fittings with heavy glasses and guards, how are the cables led in Gaslight Tubing

where are the controlling switches situated Sub-side spaces

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 where possible, 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 Yes

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 Yes

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

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	2	8.0	110	72.75	500	Steam Engine		
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	1	.06	19	.064	72.75	83	50 feet	Rubber	L.C. 27 B
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR									
ENGINE ROOM.	1	.01	7	.044	18	31	110 feet	Rubber	L.C. 7 A
BOILER ROOM.									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION	1	.007	7	.036	12	24	160 feet	Rubber	L.C. 7 A
X Gens	1	.0225	7	.064	6	46	900 feet	Rubber	L.C. 7 A and Gal. Tubing
X Saloon	1	.01	7	.044	16	31	580 feet	Rubber	L.C. 7 A and Gal. Tubing
X WIRELESS	1	.007	7	.036	10	24	600 feet	Rubber	L.C. 7 A and Gal. Tubing
SEARCHLIGHT									
X MASTHEAD LIGHTS (2)	1	.002	3	.029	Each each	7.8	250 feet each	Rubber	L.C. 7 A and Gal. Tubing
SIDE LIGHTS (2)	1	.002	3	.029	" "	7.8	80 feet each	Rubber	L.C. and Gal. Tubing
COMPASS LIGHTS (2)	1	.002	3	.029	10 each	7.8	25 feet each	Rubber	L.C.
X POOP LIGHTS (Main Light)	1	.002	3	.029	2 each	7.8	650 feet	Rubber	L.C. 7 A and Gal. Tubing
X CARGO LIGHTS	1	.0225	7	.064	26	46	590 feet	Rubber	L.C. 7 A and Gal. Tubing
ARC LAMPS									
HEATERS									

note. Circuits marked thus X have V.I.R. cables run in galvanneal conduit on deck and are connected to L.C.A. cables in Engine Room and L.C. cables in accommodation by means of link boxes.

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective 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	1	1	.0145	7	.052	27	37	140 feet	Rubber	L.C. 7 A.
VENTILATING FANS										
Oil Pumps	1	1	.01	7	.044	10	31	200 feet	Rubber	L.C. 7 A

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.

FOR TROUP, CURTIS & Co. LTD.

[Signature]

Electrical Engineers:

Date 23rd Sept 1931

COMPASSES.

Distance between electric generators or motors and standard compass 255.6"

Distance between electric generators or motors and steering compass 248'

The nearest cables to the compasses are as follows:—

A cable carrying 1 Ampères 2 feet from standard compass 2 feet from steering compass.

A cable carrying 4 Ampères 8 feet from standard compass 5 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 NIL degrees on any course in the case of the standard

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

BLYTHSWOOD SHIPBUILDING CO., LTD.

John W. Stewart

Builder's Signature.

Date 3rd Oct 1931.

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 working conditions and found satisfactory. The materials and workmanship were found to be good and sound.

On 10th April 1934 the Electrical Installation was examined and tested under full working conditions and found satisfactory.

*Noted by
19/4/34*

Total Capacity of Generators 16 Kilowatts.

The amount of Fee ... £ 15 : 10 : 07.9.31

Travelling Expenses (if any) £ : : 25-1-33

A. Stafford
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 17 APR 1934

Assigned Elec Light

1m, 30.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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