

**REPORT ON ELECTRICAL EQUIPMENT.**

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

29 JAN 1945

Received at London Office

Date of writing Report **Dec. 23rd, 1944** When handed in at Local Office **Dec. 28th, 1944** Port of **HALIFAX, Nova Scotia.**

No. in Survey held at **Meteghan, N. S.,** Date, First Survey **Apr. 19th,** Last Survey **OCT. 15th 1944.**  
 Reg. Book. (Number of Visits **8**)

on the **"M.M.S. 1055"** Tons { Gross **288**  
 Net **105**

Built at **Meteghan, N. S.,** By whom built **Clare Shipbldg. Co.** Yard No. **185** When built **1944.**

Owners **British Admiralty** Port belonging to **-**

Electric Light Installation fitted by **Clare S. B. Co.,** Contract No. **-** When fitted **1944.**

Is the Vessel fitted for carrying Petroleum in bulk **NO.**

System of Distribution **2 wire single conductor.**

Pressure of supply for Lighting **220** volts, Heating **220** volts, Power **220** 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 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 **Yes; for L.L. Sweep**, is an adjustable regulating resistance fitted in series with each shunt field **Yes.** purposes only.  
 Have certificates of test results for machines under 100 kw. been submitted and approved **Yes** Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing **-**

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 **Port and ford. and aft starboard (Star. gens. for L.L. Sweep**, is the ventilation in way of the generators satisfactory **Yes** are they clear of all inflammable material **Yes.** purposes only).  
 if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators **4 ft.** and **7 ft.**, 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 **Port ford. in 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 **3"** and **18"**, 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 **-**, is the non-hygroscopic insulating material of an approved type **-**, 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 **Yes**, individual fuses to voltmeter, pilot or earth lamp **Yes**, are moving parts of switches alive in the "off" position **One only** are all screws and nuts securing connections effectively locked **Yes** are any fuses fitted on the live side of switches **No** Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches **D.P. switches with double fuse for each outgoing circuit except light, and power which have S.P. change over.**

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 **Yes** Instruments on main switchboard **1** ammeters **1** volt-meters **-** synchronizing device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equalizer connection **-**

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** are the fusible cutouts of an approved type **Yes** have the reversed



current protection devices been tested under working conditions. **None** 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, V, X or XI of the Rules. **Yes**

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 **No less detectable** Cable Sockets, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets **Yes** 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 **Yes** Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit **Lead covered**

Support and Protection of Cables, state how the cables are supported and protected **cables run in perforated steel channel or on wood foundation. All cables suitably clipped and protected where necessary.**

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, 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 cables led through steel structure.**

Earthing Connections, state what earthing connections are fitted and their respective sectional areas **All earthing connections suitably fitted to vessel's bonding strip and sectional areas adequate.**

**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 **-**

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**

**overtaking and shaded stern**

has each navigation lamp an automatic indicator as per Rule **light only** Secondary Batteries, are they constructed and fitted as per Rule **Yes**

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 **-**

**fittings in magazine and battery rooms gastight and suitably protected by guards.** how are the cables led **Steel conduit in magazine; lead covered in battery room.**

where are the controlling switches situated **outside each compartment.**

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

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

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

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** except **1/2 H.P. fuel transfer pump motor.** 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 **drip proof.** if not of this type, state distance of the combustible material horizontally or vertically above the motors **-** and **-**

have machines of over 100 BPH 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 **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 **-** 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 **Yes**

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

PARTICULARS OF GENERATING PLANT.										
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.			
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.		
MAIN ... ..	One	25	220	115	1200	Direct coupled Diesel	Light Diesel	Above 150 F.		
<del>XXXXXXXXXX</del> F.S.	"	54	220	245	1600	"	"	"		
<del>XXXXXXXXXX</del> A.S.	"	54	220	245	1600	"	"	"		
ROTARY TRANSFORMER										
GENERATOR, LIGHTING AND HEATING CONDUCTORS.										
DESCRIPTION.	No. per Pole.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED
		Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.				
MAIN GENERATOR ... ..	One	.100	19	.083	115	118	20 ft.	Rubber	Lead covered.	
<del>XXXXXXXXXXXXXX</del> F.S.	One	.250	37	.093	200	214	60 ft.	"	"	
<del>XXXXXXXXXXXXXX</del> A.S.	One	.250	37	.093	200	214	40 ft.	"	"	
EMERGENCY GENERATOR ... ..										
ROTARY TRANSFORMER (MOTOR GENERATOR... ..)	One	.0225	7	.064	30	46	80 ft.	"	"	
ENGINE ROOM ... ..										
BOILER ROOM ... ..										
AUXILIARY SWITCHBOARDS ... ..										
ACCOMMODATION ... ..										
Wardroom ... ..	One	.0045	7	.029	15	15	100 ft.	"	"	
Ford. Accn. ... ..	One	"	7	"	15	15	130 ft.	"	"	
Aft. Accn. ... ..	One	.0015	1	.044	5	5	100 ft.	"	"	
WIRELESS ... ..	One	.0225	7	.064	30	46	100 ft.	"	"	
SEARCHLIGHT ... ..	One	.003	3	.036	10	10	140 ft.	"	"	
MASTHEAD LIGHT ... ..	One	.0015	1	.044	5	5	60 ft.	"	Lead covered and phosphor bronze wire brading (flexible)	
SIDE LIGHTS ... ..	One	.0015	1	.044	5	5	50 ft.	"	Lead covered.	
COMPASS LIGHTS ... ..	One	.0015	1	.044	5	5	60 ft.	"	"	
POOP LIGHTS ... ..										
CARGO LIGHTS ... ..										
ARC LAMPS ... ..										
HEATERS ... ..	One	.007	7	.036	20	24	70 ft.	"	"	
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 ... ..	One	One	.003	3	.036	7	10	30 ft.	Rubber	Lead covered.
CIRC. SEA WATER PUMPS ... ..										
CIRC. FRESH WATER PUMPS ... ..										
AIR COMPRESSOR ... ..										
FRESH WATER PUMP ... ..	One	One	.003	3	.036	7	10	40 ft.	"	"
ENGINE TURNING GEAR ... ..										
ENGINE REVERSING GEAR ... ..										
LUBRICATING OIL PUMPS ... ..	One	One	.007	7	.036	20	24	50 ft.	"	"
OIL FUEL TRANSFER PUMP ... ..	One	One	.003	3	.036	10	10	20 ft.	"	"
WINDLASS ... ..	One	One	.040	19	.064	60	83	220 ft.	"	"
WINCHES, FORWARD ... ..										
WINCHES, AFT ... ..										
STEERING GEAR—										
(a) MOTOR GENERATOR ... ..										
(b) MAIN MOTOR ... ..	One	One	.045	7	.029	15	15	100 ft.	"	"
WORKSHOP MOTOR ... ..										
VENTILATING FANS ... ..										
3 in Engine Room ... ..	3	One	.003	3	.036	10	10	260 ft.	"	"
W. T. Office ... ..	One	One	.003	3	.036	7	10	120 ft.	"	"
2 in Aid. Accn. ... ..	Two	One	.003	3	.036	7	10	160 ft.	"	"
Ford. Accommodation ... ..	One	One	.003	3	.036	7	10	160 ft.	"	"
Aft. Accommodation ... ..	One	One	.003	3	.036	7	10	120 ft.	"	"
Forecastle ... ..	One	One	.003	3	.036	7	10	200 ft.	"	"



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.

CLARE SHIPBUILDING COMPANY LIMITED

MEVEGAN, N. S.

Electrical Engineers.

Date DEC 21 1944

#### COMPASSES.

Distance between electric generators or motors and standard compass 12 ft. from fan motor: 25 ft. from S.F. Generator.

Distance between electric generators or motors and steering compass 8 ft. " " : 26 ft. " " " "

The nearest cables to the compasses are as follows:—

##### Compass light only.

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

A cable carrying Ampères feet from standard compass 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

The maximum deviation due to electric currents was found to be 0 degrees on W.S.W. course in the case of the standard

compass, and 0 degrees on W.S.W. course in the case of the steering compass.

CLARE SHIPBUILDING COMPANY LIMITED

MEVEGAN, N. S.

Builder's Signature.

Date DEC 21 1944

Is this installation a duplicate of a previous case Yes If so, state name of vessel "M.M.S. 1053"

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

The electrical installation of this vessel has been fitted under Special Survey to comply with the Rules and the British Admiralty Specification. The installation has been examined and tested under full working conditions and found satisfactory. The workmanship materials used are good and the vessel is eligible in my opinion, to have the notation L.M.C.(R) 11-44 so far as the electrical installation is concerned.

Noted Jan 12. 45

Total Capacity of Generators 133 Kilowatts.

The amount of Fee \$ 100.00

When applied for, Dec. 28 1944

Traveling Expenses (if any) £

When received, 19

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FEB 9 FEB 1945

Assigned See F.E. machy rpt.



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