

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

1 APR 1945

Received at London Office
of writing Report... 22nd. Jan. 1943 When handed in at Local Office... 29 Jan. 43 Port of Quebec, P.Q.

in Survey held at Quebec, P.Q. Date, First Survey 42 Last Survey 43
Reg. Book. (Number of Visits.....)

on the Steel Single Screw Corvette U.S.S. "MIGHT" ex H.M.S. "MUSK" Tons { Gross 832.97 Net 251.14

built at Quebec, P.Q. By whom built Morton Eng. & Dry Dock Co. Yard No. 22 When built 1943

owners British Admiralty Port belonging to

Electrical Installation fitted by Morton Eng. & Dry Dock Co. Ltd. Contract No. 22 When fitted 1942

Vessel fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. No

Plans submitted and approved Yes System of Distribution Two Wire conductors Voltage of supply for Lighting 115

Lighting 115 Power Direct or Alternating Current, Lighting D.C. Power If Alternating Current state periodicity Prime Movers,

the governing been tested and found as per Rule when full load is suddenly thrown on and off Yes Are turbine emergency governors fitted with a

switch as per Rule Generators, are they compound wound Yes, are they level compounded under working conditions Yes

not compound wound state distance between generators and from switchboard Where more than one generator is fitted are they

arranged to run in parallel Yes, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole

Negative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing None Have certificates of

for machines under 100 kw. been supplied Yes B.C. and the results found as per rule Yes Are the lubricating arrangements and the construction

of the generators as per rule Yes Position of Generators Aft. end of Engine Room on Flats at Lower Deck level One

Port and One Starboard is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situated

near unprotected combustible material state distance from same horizontally and vertically are the generators protected from mechanical

injury and damage from water, steam and oil Yes are the bedplates and frames earthed Yes and the prime movers and generators in metallic

contact Yes Switchboards, where are main switchboards placed One, only, on Starboard side Generator Flat, Fitted

fore and aft against ship's side, Aft of Generator.

are they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam

and oil Yes, if situated near unprotected combustible material state distance from same horizontally and vertically, what insulation

material is used for the panels Bakelite, if of synthetic insulating material is it an Approved Type Yes, if of

non-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule Yes Is the frame effectually earthed Yes

the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fuses

on pilot and earth lamps, voltmeters, etc. Yes locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead"

of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches Two 600A-250V double pole

reverse current trip, One 150 Amp. D.P.S.T. fused quickbreak switch for shore connection; one 150AMP SPST

quick break switch for equalizing.

for each outgoing circuit Eight 100 Amp. , seven 30 Amp. DBST Tandem quick break fused switches.

compartments containing switchboards composed of fire-resisting material or lined as per Rule Instruments on main switchboard Two-250

voltmeters Two-140 voltmeters synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection Yes Earth Testing, state means provided Earth lamps

switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled as

per Rule Yes If circuit breakers are provided for the generators, at what overload current did they open when tested 210, are the reversed current

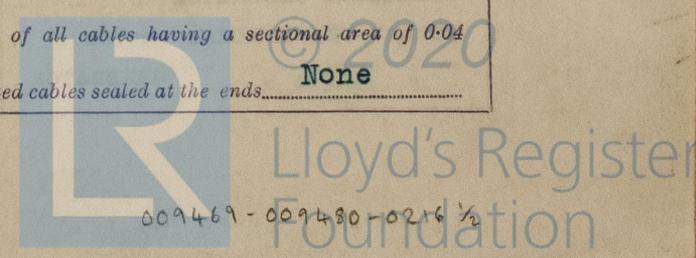
protection devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions, and at what current

they operate 25 Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes

are they insulated and protected as per the appropriate Tables of the Rules Yes, if otherwise than as per Rule are they of an approved type

the maximum fall of pressure between bus bars and any point under maximum load 3 Volts are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends. None



with insulating compound or waterproof insulating tape. Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage. Yes, are cables laid under machines or floorplates. No, if so, are they adequately protected. Are cables in machinery spaces, galleys, laundries, etc., lead covered. Yes or run in conduit. As necessary. State how the cables are supported and protected. Cables run in perforated metal troughs generally and secured by metal clips spaced in accordance with the rules, in magazines cables run in metal conduits.

Are all lead sheaths, armouring and conduits effectually bonded and earthed. Yes. Refrigerated chambers, are the cables and fittings as per Rule. -

Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands. Yes, where unarmoured cables pass through beams, etc., are the holes effectually bushed. Yes and with what material. Lead or brass bushes. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. Yes. Emergency Supply, state position. Automatic emergency lanterns. Battery operated throughout ship. Nearest 110V Supply point in police circuit. and method of control. Navigation Lamps, are they separately wired. Yes controlled by separate double pole switches. Yes and fuses. Yes Are the switches and fuses in a position accessible only to the officers on watch. Yes, is an automatic indicator fitted. Yes. Secondary Batteries, are they constructed and fitted as per Rule. -, are they adequately ventilated. - what is the battery capacity in ampere hours. -

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. Yes. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. Yes, if so, how are they protected. Magazines all air and watertight.

and where are the controlling switches fitted. Above respective hatches, are all fittings suitably ventilated. Yes, are all fittings and accessories constructed and installed as per Rule. Yes. Searchlight Lamps, No. of Two x 20", whether fixed or portable. Fixed and Two x 10" signalling Fixed are their fittings as per Rule. Yes. Heating and Cooking, is the general construction as per Rule. Yes, are the frames effectually earthed. Yes, are heaters in the accommodation of the convection type. Yes. Motors, are all motors constructed and installed as per Rule. Yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. Yes, if situated near unprotected combustible material state minimum distance from same horizontally. - and vertically. -. Are motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment. None

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. None. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule. No. Control Gear and Resistances, are they constructed and fitted as per Rule. Yes. Lightning Conductors, where required are they fitted as per Rule. Yes. Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with. Yes, are all fuses of the cartridge type. Yes are they of an approved type. Yes. Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. -. Are the cables lead covered as per Rule. -. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule. Yes, are they suitably stored in dry situations. Yes. Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. 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	Two	20	115	174	500	8" x 4" Steam driven Vertical Engine	-	-
EMERGENCY	-	-	-	-	-	-	-	-
ROTARY TRANSFORMER	-	-	-	-	-	-	-	-

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR Port	20	1	37.083	174	184	60	Rubber	Lead covered
" " EQUALISER	-	1	37.083	-	-	30	"	" "
" " Starboard	20	1	37.083	174	184	20	"	" "
EMERGENCY GENERATOR	-	-	-	-	-	-	-	-
ROTARY TRANSFORMER: MOTOR	-	-	-	-	-	-	-	-
" " GENERATOR	-	-	-	-	-	-	-	-

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS	1	19.083	100	118	40	Rubber	Lead covered
SHORE CONNECTION	1	19.064	29	83	60	"	" "
DEGAUSSING	1	19.063	50	83	80	"	" "
MIDSHIP HEATING AND GYRO COMPASS	1	19.063	65	83	120	"	" "
Aft. HEATING ETC.	1	19.052	24	64	120	"	" "
R.D.F. AND FANS	1	7.064	25	46	80	"	" "
ER & BR ALSO LOWER DECK AFT LGHT.	1	7.064	25	46	120	"	" "
FORWARD LIGHTING	1	7.064	10	46	240	"	" "
NAVIGATION	1	7.044	10	31	160	"	" "
ASDIC	1	7.044	10	31	160	"	" "
LOW POWER	1	7.036	20	24	260	"	" "
20" SEARCHLIGHTS (TWO)	1	7.036	20	24	240	"	" "
10" SIGNALLING PROJECTOR (TWO)	1	7.036	15	24	240	"	" "
WIRELESS	1	7.036	-	-	-	-	-
Three spare switches	-	-	-	-	-	-	-

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7.036	15	24	60	Rubber	Lead covered
NAVIGATION LIGHTS	1	7.036	10	24	120	"	" "
LIGHTING AND HEATING	1	7.029	4	15	-	"	" "
		3.036	4	10	-	"	" "
All sub-circuits throughout ship for lighting and heating are of the last two sizes.							

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Sanitary Pump Motor	1	1/3	1	7.029	3.2	15	40	Rubber Lead covered
Fresh Water Pump Motor	1	1/3	1	7.029	3.2	15	60	" "

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
 All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
 The foregoing is a correct description.

MORTON ENGINEERING & DRY-DOCK CO. LTD.

Bob Morton
 PRESIDENT

Electrical Engineers.

Date JAN 27 1943

COMPASSES.

Minimum distance between electric generators or motors and standard compass..... 90 feet
 Minimum distance between electric generators or motors and steering compass..... 95 feet

The nearest cables to the compasses are as follows:—

A cable carrying .5 Ampères on ~~XXXXXX~~ standard compass on ~~XXXXXX~~ steering compass.

A cable carrying .25 Ampères in ~~XXXXXX~~ feet from standard compass in ~~XXXXXX~~ steering compass.

A cable carrying 1 Ampères 3 feet from standard compass 3 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 3° degrees on Easterly course in the case of the standard compass, and - degrees on - course in the case of the steering compass.

MORTON ENGINEERING & DRY-DOCK CO. LTD.

Bob Morton
 PRESIDENT

Builder's Signature.

Date

JAN 27 1943

Is this installation a duplicate of a previous case? No If so, state name of vessel

Plans. Are approved plans forwarded herewith..... If not, state date of approval.....

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith Yes Generators

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.) The Electrical

Equipment of this Vessel has been fitted on board under Special Survey and in accordance with the approved plans and tested under full working conditions and found satisfactory.

The materials and workmanship are good and sound.

*Noted
 L.L.
 6/4/43*

Total Capacity of Generators 40 Kilowatts.

The amount of Fee ... \$100.:

When applied for, Feb. 19 1943

Travelling Expenses (if any) £ - : When received.

Charged with Hull Expenses 19.....

W. Bloomfield
 Surveyor to Lloyd's Register of Shipping.

FRI. 16 APR 1943

Committee's Minute

Assigned *See FE machy etc.*

5m. 4.38.—Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)