

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 15 OCT 1942

Received at London Office.

Date of writing Report 17.9.42 When handed in at Local Office 14 OCT 1942 Port of Hull

No. in Survey held at Hull Date, First Survey 15.6.42 Last Survey 16.9.42
Reg. Book. (Number of Visits 2)on the single screw Rescue Tug "DEXTEROUS" Tons { Gross 601
Net 3

Built at Hull By whom built Buchanan Sons Ltd. Yard No. 1247 When built 1942

Owners: The Admiralty Port belonging to ✓

Electrical Installation fitted by Wm Brassey Son Ltd. Contract No. ✓ When fitted 1942

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

Have plans been submitted and approved Yes System of Distribution Parallel Conductors Voltage of supply for Lighting 110

Heating 110 Power 110 Direct or Alternating Current, Lighting DC Power DC If Alternating Current state periodicity ✓ Prime Movers,

has 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

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

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

arranged to run in parallel No 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 ✓ Have certificates of

test for machines under 100 kw. been supplied Yes 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 Engine room

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 Engine room, adjoining 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 SINDANYO if of synthetic insulating material is it an Approved Type Yes if of

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

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

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

side of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches

D. P. switches and fuses

and for each outgoing circuit D. P. switches and fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule ✓ Instruments on main switchboard One

ammeters One voltmeters ✓ synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection ✓ Earth Testing, state means provided Earth lamps + switches

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 ✓ are the reversed current

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

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

Cables, 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 ✓

state maximum fall of pressure between bus bars and any point under maximum load 4 mm 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

DEXTEROUS

DEXTEROUS

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. ☒ are cables laid under machines or floorplates. ☒ if so, are they adequately protected. ☒ Are cables in machinery spaces, galleys, laundries, etc., lead covered. ☒ or run in conduit. ☒ State how the cables are supported and protected. *clipped to trays & bulkheads*

Are all lead sheaths, armouring and conduits effectually bonded and earthed. ☒ 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. ☒ where unarmoured cables pass through beams, etc., are the holes effectively bushed. ☒ and with what material. *lead* Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. ☒ Emergency Supply, state position. *None* and method of control. ☒

Navigation Lamps, are they separately wired. ☒ controlled by separate double pole switches. ☒ and fuses. ☒ Are the switches and fuses in a position accessible only to the officers on watch. ☒ is an automatic indicator fitted. ☒ Secondary Batteries, are they constructed and fitted as per Rule. ☒ are they adequately ventilated. ☒ what is the battery capacity in ampere hours. *144*

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

and where are the controlling switches fitted. ☒ are all fittings suitably ventilated. ☒

are all fittings and accessories constructed and installed as per Rule. ☒ Searchlight Lamps, No. of *One*, whether fixed or portable. *portable* are their fittings as per Rule. ☒ Heating and Cooking, is the general construction as per Rule. ☒

are the frames effectually earthed. ☒ are heaters in the accommodation of the convection type. ☒ Motors, are all motors constructed and installed as per Rule. ☒ and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. ☒ 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. ☒

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. ☒ Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule. ☒

Control Gear and Resistances, are they constructed and fitted as per Rule. ☒ Lightning Conductors, where required are they fitted as per Rule. ☒ 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. ☒ are all fuses of the cartridge type. ☒

are they of an approved type. ☒ 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. ☒ are they suitably stored in dry situations. ☒ Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. ☒

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 ...	ONE	15	110	136	500	Steam Engine	—	—
HARBOR ...	ONE	7.5	110	68	500	"	—	—
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 ...	15	One	37/072	136	152	40	VIR	LC AP 6187A
" " ...	7½	One	19/064	68	83	24	"	" 6189A
SHORE CONNECTION	15	One	37/072	136	152	30	"	" 6187A
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 DG ...	One	19/064	37	83	52	VIR	LC AP 6189A
Forward Lighting	"	7/064	44	46	280	"	" 6191A
Whellhouse, Chartroom etc	"	7/036	6	24	275	"	" 6193A
Navigation	"	"	9	"	275	"	"
Ventilation	"	"	22	"	260	"	"
10" Signalling Projector	"	"	14	"	290	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS Switch from mainboard ...	One	7/064	—	31	225	VIR	LC AP 6192A
NAVIGATION LIGHTS	"	1/044	1.5	5	160	"	" 6196A
LIGHTING AND HEATING	"	7/0076	10	10	160	TR5	7988A
Immersion heaters for oil fuel gallery	"	3/036	5	10	45	LC	6195A
Sub-circuit	"	1/044	3	5	60	"	" 6196A

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Ventilating fans 10'	2	One	One	7/029	11	15	60	VIR LC AP 6194A
do 5'	2	¼	"	1/044	2.5	5	100	" 6196A
Refrigerator	1	¾	"	"	—	5	30	"
Living for domestic type refrigeration as per Admiralty plan. The 9½ HP motor stated to be in excess of power required.								

DEXTEROUS

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.

Electrical Engineers.

Date 6th Oct 1942

COMPASSES.

Minimum distance between electric generators or motors and standard compass 90 ft.

Minimum distance between electric generators or motors and steering compass 85 ft.

The nearest cables to the compasses are as follows:—

A cable carrying .5 Ampères 3 feet from standard compass 3 feet from steering compass.

A cable carrying 5 Ampères 10 feet from standard compass 8 feet from steering compass.

A cable carrying 3 Ampères 10 feet from standard compass 8 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.

FOR COCHRANE & SONS, LTD.

Builder's Signature.

Date.

V. Gray

DIRECTOR

Is this installation a duplicate of a previous case. Yes If so, state name of vessel Decision

Plans. Are approved plans forwarded herewith. no If not, state date of approval. 10.9.41

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

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

This electrical installation has been fitted on board under Special Survey in accordance with the approved plans and the Rules. The workmanship and materials are good and when tried under working conditions and tested as required by the Admiralty and the Rules the installation was found satisfactory in every respect.

Noted

L.P.

17/10/42

Total Capacity of Generators 22.5 Kilowatts.

The amount of Fee £ 30 : -

When applied for,

14 OCT 1942

Travelling Expenses (if any) £ :

When received.

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W. S. Shields

Surveyor to Lloyd's Register of Shipping.

FRI. 6 NOV 1942

Committee's Minute

Assigned

See Incl. 2.E. 51768



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