

REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 21 OCT 1946

Date of writing Report.....19..... When handed in at Local Office..... 23 OCT 1946.....19..... Port of..... HULL.....

No. in Survey held at..... Gainsborough..... Date, First Survey..... 27. 9. 45..... Last Survey..... 17. 10. 19 46.....
Reg. Book..... (Number of Visits..... 6.....)

on the "T.R.V. 8". (Torpedo Recovery Vessel). Tons {Gross..... 193.....
Net..... 59.....

Built at..... Gainsborough..... By whom built..... J.S. Watson (Gainsborough) Ltd. Yard No..... 1551..... When built..... 1946.....

Owners..... The Admiralty..... Port belonging to..... -.....

Electrical Installation fitted by..... Sunderland Forge & Co. Ltd. Contract No..... -..... When fitted..... 1946.....

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

Have plans been submitted and approved..... Yes..... System of Distribution..... two wire..... Voltage of supply for Lighting..... 220.....

Heating..... No..... Power..... Yes..... Direct or Alternating Current, Lighting..... D.C. Power..... D.C. If Alternating Current state frequency..... -..... Prime Movers,

has the governing been tested and found efficient when the whole 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..... 15 KW port side of engine room, 3 1/2 KW switchboard.

....., 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 port side.

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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..... "Syndanyo"....., 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..... Double pole quick

break knife switches and double pole fuses.

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and for each outgoing circuit..... Double pole quick break knife switches and double pole fuses.

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Are compartments containing switchboards composed of fire-resisting material or lined as per Rule..... Yes..... Instruments on main switchboard..... two

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

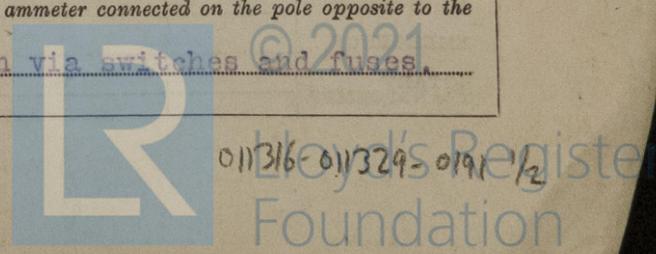
equaliser connection..... Earth Testing, state means provided..... Lamps coupled to earth via switches and fuses

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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, are the reversed current protection devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions Yes. 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 Yes, state maximum fall of pressure between bus bars and any point under maximum load 3V, 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 exposed ends Yes with insulating compound Yes or waterproof insulating tape Yes. 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 Yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit Yes. State how the cables are supported and protected Clipped to perforated steel trays.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes. Refrigerated chambers, are the cables and fittings as per Rule Yes. 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. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. Emergency Supply, state position Emergency Supply, state position and method of control Emergency Supply, state position.

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 Yes, are they adequately ventilated Yes. 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 Yes.

Admiralty pattern fittings

and where are the controlling switches fitted on mess deck above, are all fittings suitably ventilated Yes, are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of 1-6", whether fixed or portable portable, 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 Yes and vertically Yes.

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing Yes. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule Yes. 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. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type Yes. 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 megger 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 ... No. 1	1	15	220	68	1000	Diesel engine		
" " No. 2	1	32	220	15.8	1400	" "		
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 ... No. 1	15	1	19/.064	68	83	90'	V.I.R.	I.C. A.P. 6189A
" " EQUALISER No. 2	32	1	7/.036	15.8	24	120'	"	" " 6193A
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.		
AUX. SWITCHBOARDS AND SECTION BOARDS ...								
Lighting circuits		1	7/.036	10	24	15'	V.I.R.	I.C. A.P. 6193A
Ventilating circuits		1	7/.064	30	46	36'	"	" " 6191

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.		
WIRELESS ...		1	7/.029	10	15	120'	V.I.R.	I.C. A.P. 6194A
NAVIGATION LIGHTS ...		1	7/.029		15	120'	"	" " "
LIGHTING AND HEATING								
Engine room		1	7/.029	6.5	15	75'	"	" " "
Accumulation		1	7/.029	6.5	15	90'	"	" " "
Wheelhouse		1	7/.029	3	15	120'	"	" " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.	
Windlass	1	7	7/.044	28	31	240'	V.I.R.	I.C. A.P. 6192A
winch	1	9	7/.064	25	46	210'	"	" " 6191A
Steering gear	1	4	7/.036	17	24	90'	"	" " 6193A
Impeller motor	1	1	7/.044	2.5	5	30'	"	" " 6196A
12" engine room fan	1	1	7/.029	4.0	15	72'	"	" " 6194
7" torpedo hold fan	1	1	"	2.5	15	288'	"	" " "
5" accommodation fan	1	2	"	1.0	15	168'	"	" " "
" " "	1	2	"	1.0	15	90'	"	" " "

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.

J. Barber
for Messrs The Sunderland Forge & Eng Co Ltd

Electrical Engineers.

Date *Sept 16th 46*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *25'*

Minimum distance between electric generators or motors and steering compass *20'*

The nearest cables to the compasses are as follows:—

A cable carrying *7* Ampères *inside* feet from standard compass *5'* feet from steering compass.

A cable carrying *7* Ampères *5* feet from standard compass *inside* 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 *every* course in the case of the

standard compass, and *Nil* degrees on *every* course in the case of the steering compass.

J. S. WATSON (GAINSBOROUGH) LTD

J. S. Watson
Managing Director

Builder's Signature.

Date *18th Sept 1946*

Is this installation a duplicate of a previous case *Yes* If so, state name of vessel *"H. B. V. 21"*

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

The electrical equipment of this vessel was installed under special survey and in accordance with the specification.

The materials used are of good quality and the workmanship is good.

On completion the equipment was operated under working conditions with satisfactory results and the insulation resistance of all circuits and apparatus was measured and found good.

This equipment is in my opinion suitable for a classed vessel.

Noted

Thu 25.11.46

Total Capacity of Generators *18 1/2* Kilowatts.

The amount of Fee ... £ 33 : 10

When applied for,

.....19.....

Travelling Expenses (if any) £ : :

When received,

.....19.....

R. E. Cornell

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 22 NOV 1946*

Assigned *See F.E. mchey. rpt.*

2m.10.38.—Transfer. (MADE IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minutes.)

ML-2



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