

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office..... AUG 1941

Date of writing Report..... 19..... When handed in at Local Office..... 15 AUG 1941..... Port of.....

No. in Survey held at Hull. Date, First Survey 17.6.41 Last Survey 25.7.41
Reg. Book. (Number of Visits..... 8.....)

on the H.M.T. INCHCOLM. Tons { Gross 452
Net 142 1/2

Built at Beverly By whom built Cook, Wilkin & Gornall Yard No. 676 When built 1941-7

Owners The Admiralty Port belonging to.....

Electrical Installation fitted by Wm Broady Sons Ltd Contract No. When fitted 1941-7

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 - constant pressure Voltage of supply for Lighting 110
2 wire

Heating 110 Power 110 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 ✓, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole

Positive 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 ✓ and the results found as per rule ✓ Are the lubricating arrangements and the construction

of the generators as per rule Yes Position of Generators Engine rooms. ASD: oho

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 rooms adjacent to 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 Uninsulated on frame work with mica strip insulation, if of synthetic insulating material is it an Approved Type ✓, 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.....

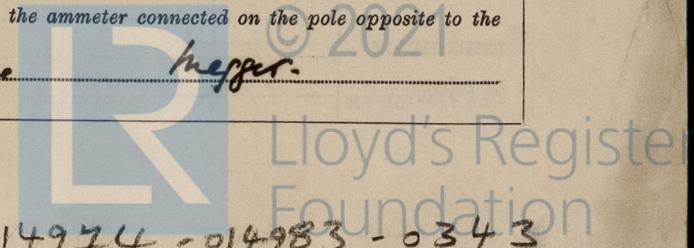
D.P. Switches & fuses.

and for each outgoing circuit D.P. Switches & fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes 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 Megger.



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 ✓, have they been tested under working conditions ✓. 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 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 exposed ends ✓ 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 Yes, if so, are they adequately protected ✓. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit ✓. State how the cables are supported and protected Clipped to trays or bulkheads.

Cables run in solid drawn conduit in bulkhead & magazine spaces

Are all lead sheaths, armoring 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 Cad. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. Emergency Supply, state position None 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 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, weather proof 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 Special Admiralty lamps in magazine with cables in conduit

and where are the controlling switches fitted Stoker's mess, adjacent, are all fittings suitably ventilated Yes, are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of One 20", whether fixed or portable fixed 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 ✓ 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 ✓.

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 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 ✓, are all fuses of the 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 flameproof type ✓. 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	One	15	110	136	500	Sea	Sea	
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	18	V.I.R.	L.C.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS	DESCRIPTION	CONDUCTORS	MAXIMUM CURRENT	APPROX. LENGTH	INSULATED WITH	HOW PROTECTED
DG	Clarification	One 7/044	30	31	150	V.I.R. L.C.
	Wireless	" 7/036	15	24	150	" "
	Search lights	" "	25	"	135	" "
	For'd lighting	" 7/044	15	"	150	" "
	Aft "	" "	29	"	120	" "
	For'd Radiator	" "	18	"	150	" "
	Aft "	" "	27	"	120	" "
	Asdic	" "	-	"	-	" "
	Star connection	" 37/072	136	152	70	" "

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION	CONDUCTORS	MAXIMUM CURRENT	APPROX. LENGTH	INSULATED WITH	HOW PROTECTED
NAVIGATION LIGHTS	One 1/044	1.5 max	5	240 max	V.I.R. L.C.
LIGHTING AND HEATING	" 7/0076	"	10	90 "	" Tough rubber sheathing + some cases Prot By Branding
	" 1/044	3 max	5	140 max	" "
	" 3/036	9	10	20 "	" "
	" "	10	"	60 "	" "
	" "	3	"	60 "	" "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS	MAXIMUM CURRENT	APPROX. LENGTH	INSULATED WITH	HOW PROTECTED
7 1/2 Vent Fan	1	.5	One 3/036	4	10	50	V.I.R. L.C.
5" "	2	.2	" "	2	"	100	" "
3 1/2 cu ft Refrigerator	1	.5	" 1/044	4	5	20	" "

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.

WM BROADY & SON LTD.
 ENGLISH STREET,
 LONDON, E.C. 4.

Electrical Engineers. Date 14. 8. 41.

COMPASSES.

Minimum distance between electric generators or motors and standard compass.....
 Minimum distance between electric generators or motors and steering compass.....
 The nearest cables to the compasses are as follows:-
 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 full power.....
 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 degrees on course in the case of the
 standard compass, and degrees on course in the case of the steering compass.

Number of cables in to vicinity of compass for & also of deviations in available

Builder's Signature. Date.....

Is this installation a duplicate of a previous case Yes. If so, state name of vessel H.M.T. BIRCH with minor additions

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

This installation has been fitted on board in accordance with the approved Admiralty plans & requirements & the Society's Rules. The workmanship & materials are good & when subjected to the tests required by the Admiralty & as prescribed in the Rules & also when tried under working conditions this installation was found satisfactory in every respect.

*Noted
 19/8/41*

Total Capacity of Generators 15 Kilowatts.

The amount of Fee ... £ 15:0 : { When applied for, 14.8.1941
 Travelling Expenses (if any) £ : : { When received,19.....

L. G. ...
 Surveyor to Lloyd's Register of Shipping.

TUE. 19 AUG 1941

Committee's Minute
 Assigned See machine FE. rpl.

2m.10.33.—TRANSFER. (MADE IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

