

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office... MAY 28 1940

Date of writing Report... 9-4-1940 When handed in at Local Office... 25 MAY 1940 Port of... HULL

No. in Survey held at... Hull Date, First Survey... 14. 12. 39 Last Survey... 20. 4. 1940
Reg. Book. (Number of Visits... 14.)

on the... H.M.S. BIRCH Tons { Gross... 452
Net... 144

Built at... Beverley By whom built... Cook, Weller & Grummett Yard No... 652 When built... 1940-4

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

Electrical Installation fitted by... Wm Broady & Co Contract No... When fitted... 1940-4

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

Have plans been submitted and approved... Yes System of Distribution... Parallel-constant current two-bore Voltage of supply for Lighting... 110

Heating... 110 Power... Direct or Alternating Current, Lighting... Direct Power... 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

The Generators have been supplied & inspected by the Admiralty

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 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 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... Units mounted on frame work insulated with mica strips 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...

DP. Switches & fuses.

and for each outgoing circuit... DP. 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 Meffer.

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.....*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.....*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.....*Yes*....., 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 & trays or bulk leads. Cable runs in solid drawn conduit*

Navigation Lamps, are they separately wired Yrs controlled by separate double pole switches Yrs and fuses Yrs. Are the switches and fuses in a position accessible only to the officers on watch Yrs, is an automatic indicator fitted none. Secondary Batteries, are they constructed and fitted as per Rule none, are they adequately ventilated Y.

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

Special Admiralty pattern lamps in Magazine not Cabot in engine
and where are the controlling switches fitted Stow mess deck adjacent are all fittings suitably ventilated Yes
are all fittings and accessories constructed and installed as per Rule Yes Searchlight Lamps, No. of One, 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 CRane 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 Special entry to engine room ✓ 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..... 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..... 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....., are they suitably stored in dry situations..... Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory.....

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX.	INSULA- TED WITH.	HOW PROTECTED.
		No. in Parallel For Fals.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	LENGTH (load plus return feet).		
MAIN GENERATOR	15	Gne	37/072	136	152	18	K.I.R.	L.C.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS	D.G.	Gne	7/044	30	31	—	V.I.R.	L.C
Charlization	"	"	7/036	15	24	150	"	"
Wireless.	"	"	"	25	"	135	"	"
Shore connection	"	"	37/072	106	152	70	"	"
For'd lighting	"	"	7/044	23	31	150	"	"
Aft do.	"	"	"	29	"	120	"	"
For'd Radiator	"	"	"	18	"	150	"	"
Aft do.	"	"	"	27	"	120	"	"
Accid.	"	"	"	—	"	—	"	"

LIGHTING AND HEATING, ETC., CABLES.

<u>WIRINGS</u>	Gne.		1.5 max	5	240 max	K.P.R.	L.C.
NAVIGATION LIGHTS	Gne.	70/0276	"	10	90 "	"	Tough Rubber Sheathing & ins. over Phos Bronze Braiding
LIGHTING AND HEATING							
All Lifting Radialini + 1st Deck	Gne.	1/004	3 max	5	140 max	"	L.C.
	"	3/036	9	10	20 "	"	"
Signalmg prop leader (Direct from Main Board)	"	7/036	19	24	140	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.
Table for only		

The foregoing is a correct description.

Electrical Engineers.

Date 15 May 1940

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.

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Have the compasses been adjusted with and without the electric installation at work 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 10° degrees on any course in the case of the

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

Builder's Signature

Date _____

Is this installation a duplicate of a previous case

STANDARD
ADMIRALTY
TRAWLER

If so, state name of vessel

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 & those prescribed in the Rules & also when tried under full working conditions the installation was found satisfactory in every respect.

The requisite stores & spare food have been demanded & checked on board the vessel.

Notes

30/5/40

Total Capacity of Generators.....15.....Kilowatts.

The amount of Fee

When applied for,

.....19.....

Travelling Expenses (if any)

When received.

.....19.....

Committee's Minute

TUE 4 JUN 1940

Assigned

See Vol 7E. 50673

Dwyer & H. Johnson
Surveyor to Lloyd's Register of Ships

Surveyor to Lloyd's Register of Shipping.