

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report.....19..... When handed in at Local Office.....19..... Port of ABERDEEN.No. in Survey held at ABERDEEN Date, First Survey 28.8.43 Last Survey 25 Oct 1943  
(Number of Visits.....)Reg. Book. 16521 on the S.TUG. 'EMPIRE HARLEQUIN' Tons { Gross 232.28  
Net.....Built at ABERDEEN By whom built ALEX. HALL & CO LTD (ABERDEEN) Yard No. 693 When built 1943Owners MINISTRY OF WAR TRANSPORT Port belonging to -Electrical Installation fitted by CLAUDE HAMILTON (ABERDEEN) LTD. Contract No. 693 When fitted 1943Is vessel fitted for carrying Petroleum in bulk - Is vessel equipped with D.F. - E.S.D. - Gy.C. - Sub.Sig. -Have plans been submitted and approved Yes System of Distribution Two wire Voltage of supply for Lighting 110Heating - Power - Direct or Alternating Current, Lighting D.C. Power - 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 atrip 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 theyarranged to run in parallel -, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive polenegative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing - Have certificates oftest for machines under 100 kw. been supplied Yes and the results found as per rule Yes Are the lubricating arrangements and the constructionof the generators as per rule Yes Position of Generators In engine roomYes is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situatednear unprotected combustible material state distance from same horizontally - and vertically -, are the generators protected from mechanicalinjury and damage from water, steam and oil Yes, are the bedplates and frames earthed Yes and the prime movers and generators in metalliccontact Yes Switchboards, where are main switchboards placed near generator.Yes are they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steamand oil Yes, if situated near unprotected combustible material state distance from same horizontally - and vertically -, what insulationmaterial is used for the panels Indanap., if of synthetic insulating material is it an Approved Type Yes if ofsemi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule - Is the frame effectually earthed YesIs the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fusesto 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. Switch and fusesYes and for each outgoing circuit D.P. Switch and fusesYes Are compartments containing switchboards composed of fire-resisting material or lined as per Rule - Instruments on main switchboard 1ammeters 1 voltmeters - synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to theequaliser connection - Earth Testing, state means provided earth lampsSwitches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled asper Rule Yes If circuit breakers are provided for the generators, at what overload current did they open when tested -, are the reversed currentprotection devices connected on the pole opposite to the equaliser connection -, have they been tested under working conditions, and at what currentdid they operate - Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule YesCables, 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 3 1/4, are the ends of all cables having a sectional area of 0.04square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends YesYes Are paper insulated and varnished cambric insulated cables sealed at the ends YesYes Are paper insulated and varnished cambric insulated cables sealed at the ends YesYes Are paper insulated and varnished cambric insulated cables sealed at the ends YesYes Are paper insulated and varnished cambric insulated cables sealed at the ends YesYes Are paper insulated and varnished cambric insulated cables sealed at the ends YesYes Are paper insulated and varnished cambric insulated cables sealed at the ends YesYes Are paper insulated and varnished cambric insulated cables sealed at the ends YesYes Are paper insulated and varnished cambric insulated cables sealed at the ends YesYes Are paper insulated and varnished cambric insulated cables sealed at the ends YesYes Are paper insulated and varnished cambric insulated cables sealed at the ends Yes



| 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. of Sq. ins. or $\phi$ mm. | In the Circuit.             | Rule. |   |                 |                |
| MAIN GENERATOR ... ..         | 7.5        | 1                         | 14.064   | 68                          | 83    | 20                                      | Rubber          | L.C.           |
| " " EQUALISER ... ..          |            |                           |  |                             |       |   |                 |                |
|                               |            |                           |  |                             |       |   |                 |                |
|                               |            |                           |  |                             |       |   |                 |                |
|                               |            |                           |  |                             |       |   |                 |                |
| EMERGENCY GENERATOR ... ..    |            |                           |  |                             |       |   |                 |                |
| ROTARY TRANSFORMER: MOTOR ... |            |                           |  |                             |       |   |                 |                |
| " " GENERATOR ...             |            |                           |  |                             |       |   |                 |                |

[illegible][illegible]



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.

CLAUD HAMILTON (ABERDEEN) LTD.  
ELECTRICAL ENGINEERS  
254 UNION STREET, ABERDEEN

*J. Walker*

Electrical Engineers.

Date *2/11/43*

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass *15 feet.*

Minimum distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying *2* Ampères *led m/b* feet from standard compass — feet from steering compass.

A cable carrying *1.5* Ampères *10* 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 work at full power *h.*

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted *h.*

The maximum deviation due to electric currents was found to be *nil* degrees on *any* course in the case of the standard compass, and — degrees on — course in the case of the steering compass.

For ALEXANDER HALL & Co. LTD.

*W. V. Smith*

Builder's Signature.

Date *2/XI/1943*

Is this installation a duplicate of a previous case *h.* If so, state name of vessel *S. TUG. 'EMPIRE SPARE.'*

Plans. Are approved plans forwarded herewith *h.* If not, state date of approval *1-6-42*

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

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 M.O.W.T specification, tested under working conditions and found satisfactory. The materials and workmanship are good.*

*Noted*

*h.*

*11/11/43*

Total Capacity of Generators *7.5* Kilowatts.

The amount of Fee ... £

*M.O.W.T. Spec*

Travelling Expenses (if any) £

When applied for,

*4.10.1943*

When received.

*10.10.1943*

*J. D. Avery*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*FRI. 12 NOV 1943*

Assigned

*see minute on  
J.S. Rpt.*



© 2020

Lloyd's Register  
Foundation