

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 19-3-1957 When handed in at Local Office 25-3-1957 Port of GLASGOW

No. in Survey held at GLASGOW Date, First Survey 4-12-56 Last Survey 27-2-57  
Reg. Book. (No. of Visits 9) 478

91096 on the H. M. TUG "DEXTEROUS" Tons { Gross 478  
Net 478

Built at GLASGOW By whom built YARROW & CO. LTD. Yard No. 2089 When built 1957

Owners ADMIRALTY Port belonging to —

Installation fitted by YARROW & CO. LTD. When fitted 1957

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

Plans, have they been submitted and approved Yes System of Distribution Two wire Voltage of Lighting 220

Heating 220 Power 220 D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency —

Prime Movers, has the governing been found as per Rule when full load is thrown on and off Yes Are turbine emergency governors fitted with a trip switch — Generators, are they compound wound Yes, and level compounded under working conditions Yes

Are the generators arranged to run in parallel Yes Is the compound winding connected to the negative or positive pole Positive

Have machines 100 kw. and over 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 Yes Position of Generators Two 60 KW sets, port & starboard sides of motor room, 2-60KW sets midships in generator room

is the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil Yes Switchboards, where are main switchboards placed Special platform thwartside, main deck level aft bulkhead of motor room

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil Yes, what insulation is used for the panels Dead front type, fittings mounted on insulated bars, 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 construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear for each generator and arrangement of equaliser switches Triple pole circuit breaker (third pole equaliser) fitted with overcurrent, reverse current and undervoltage trips, also preference tripping device for non-essential circuits

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Double pole circuit breaker fitted with overcurrent trips, or Double Pole knife switch and fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 4 ammeters 4 voltmeters — synchronising devices — For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided Earth lamps Preference Tripping, state if provided Yes, and tested Yes

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes make of fuses Admiralty Pattern, are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 150% full load current, and at what current do the reverse current protective devices operate 10-15% full load current Cables, are they insulated and protected as per Rule 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 less than 6 1/8 volts Are all paper insulated and varnished cambric insulated cables sealed at the ends 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 any cables laid under machines or floorplates Yes, if so, are they adequately protected Yes State type of cables (if in conduit this should also be stated) in machinery spaces VC.HRB, VCLC or VIRHRB, galleys VIRHRB and laundries — State how the cables are supported or protected Cables clipped to steel tray, steelwork or woodwork and protected where necessary

Are all lead sheaths, armouring and conduits effectually bonded and earthed 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 effectively bushed Yes Refrigerated chambers, are the cables and fittings as per Rule —

Have refrigeration fan motors been constructed under survey — and test certificates supplied —

Are the motors accessible for maintenance at all times —



Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory..... *Yes*



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.

*R. Mitchell*

Date



Electrical Contractors.

Date *22/3/57*

#### COMPASSES.

Have the compasses been adjusted under working conditions

*Yes*

YARROW & CO. LTD.,  
GLASGOW, W. 4

*R. Mitchell*

Date

Builder's Signature.

Date

*22<sup>nd</sup> March 57.*

Have the foregoing descriptions and schedules been verified and found correct

*Yes*

Is this installation a duplicate of a previous case

*Yes*

If so, state name of vessel

*H.M. TUG "DIRECTOR"*

Plans. Are approved plans forwarded herewith

*No*

If not, state date of approval

*23-7-1956*

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

*Yes*

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.)

*The electrical equipment of this vessel has been fitted on board under Special Survey, tested under working conditions and found satisfactory. The quality of materials and workmanship is good.*

Total Capacity of Generators *240* Kilowatts.

*Less 14 K.W. for Propulsion Excitation machinery.*

The amount of Fee *221 K.W. £ 75 : 3*

*Admiralty Spec. £ 75 : -*

When applied for,  
*26 MAR 1957*

When received,

Travelling Expenses (if any) £ *- : 9*

*Fred B. Mott for H.G. FINDLAY & SELF.*  
Surveyor to Lloyd's Register of Shipping.

GLASGOW *26 MAR 1957*

Committee's Minute

SEE ACCOMPANYING MACHINERY REPORT

Assigned