

Rpt. 13.

No. 74452

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office. 15 SEP 1949

Date of writing Report 31<sup>st</sup> August 1949 When handed in at Local Office 5.9.1949 Port of GLASGOW.  
 No. in Survey held at PORT GLASGOW Date, First Survey 24<sup>th</sup> FEBRUARY Last Survey 25<sup>th</sup> JULY 1949  
 Reg. Book. (No. of Visits 8)  
 40005 on the BUCKET DREDGER 'MERSEY ENGINEER' Tons Gross 249 Net 287  
 Built at PORT GLASGOW By whom built FERGUSON BROS (PORT GLASGOW) LTD Yard No. 388 When built 1949  
 Owners MERSEY DOCKS & HARBOUR BOARD Port belonging to LIVERPOOL  
 Installation fitted by J. CHARTERS When fitted 1949  
 Is vessel equipped for carrying Petroleum in bulk No Is vessel equipped with D.F. ☒ E.S.D. ☒ Gy.C. ☒ Sub.Sig. ☒ Radar ☒

Plans, have they been submitted and approved ☒ YES System of Distribution TWO WIRE Voltage of Lighting 110 Volts  
 Heating ☒ Power 110 Volts 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  
 if not compound wound state distance between generators ☒ and from switchboard ☒ Are the generators 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  
 Position of Generators STARBOARD SIDE OF ENGINE 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 ADJACENT TO GENERATORS,

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 FITTINGS MOUNTED ON INSULATED STEEL RODS 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 150 AMP D.P. KNIFE PATTERN SWITCH WITH FUSES.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit 100 AMP OR 60 AMP D.P.C.O. SWITCHES WITH  
 FUSES.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule ☒ Instruments on main switchboard Two  
 ammeters Two voltmeters ☒ synchronising devices For compound machines in parallel are the ammeters and reversed current  
 protection devices connected on the pole opposite to the equaliser connection ☒ Earth Testing, state means provided

Switches, Circuit Breakers and Fuses, are they as per Rule ☒ YES, are the fuses an Approved Type ☒ YES  
 make of fuses FERGUSON & MUNRO LTD, are all fuses labelled ☒ YES If circuit breakers are provided for the generators, at what  
 overload do they operate ☒ and at what current do the reversed current protective devices operate ☒

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule ☒ YES  
 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 5 Volts, are the ends of all cables having a sectional  
 area of 0.01 square inch and above provided with soldering sockets ☒ YES 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 Are cables in machinery spaces, galleys, laundries, etc., lead covered ☒ YES or run in conduit ☒  
 or of the "HR" type ☒ State how the cables are supported or protected MAINS L.C. CABLES CLIPPED TO STEEL  
 TRAY MACHINERY SPACE - L.C. CABLE CLIPPED TO STEEL TRAY OR STEELWORK ACCOMMODATION.  
 - L.C. CABLE CLIPPED TO WOODWORK.

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 ☒



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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. YES Emergency Supply, state position

Navigation Lamps, are they separately wired YES controlled by separate double pole switches 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. Is an alternative supply provided YES.

Secondary Batteries, are they constructed and fitted as per Rule....., are they adequately ventilated.....  
state battery capacity in ampère hours.....

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. Yes

Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present..... No  
if so, how are they protected.....

and where are the controlling switches fitted..... ✓ Are all fittings suitably ventilated..... ✓

Searchlight Lamps, No. of ONE, whether fixed or portable FIXED, are they of the carbon arc or of the filament type FILAMENT

Heating and Cooking, is the general construction as per Rule.....✓....., are the frames effectually earthed.....✓....., are heaters in the

accommodation of the convection type..... ✓ **Motors,** are all motors constructed and installed as per Rule and placed in well-ventilated

compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil. YES

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump

compartment.....✓ 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 sea 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..... 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 an Approved Cartridge Type....., make of fuse..... Are the fittings for pump

rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. Are the cables lead covered as per Rule

*E.S.D.*, if fitted state maker..... ✓ ..... location of transmitter..... ✓ ..... and receiver..... ✓

Spare Gear, if the vessel is for open sea service Have spares been provided, as per Rule and suitably stored in dry situations YES

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

## PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	2	LAWRENCE SCOTT & ELMS.	12 1/2	110	113.5	650	STEAM	SISSONS
EMERGENCY ...								
ROTARY								
TRANSFORMER								

## GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... ..	12½	1	19/064	113.5	135	32	V.C.	L.C.
" " EQUALISER ... ..								
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR ... ..								
" " GENERATOR ... ..								

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

LIGHTING, HEATING, WIRELESS. NAVIGATION LIGHTS. ETC., CABLES.

[illegible]

## MOTOR CABLES.

[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.

*J. Charters*

Electrical Contractors.

Date *31<sup>st</sup> Aug. 1949*

#### COMPASSES.

Have the compasses been adjusted under working conditions.

*YES*

*Peter Ferguson*

Builder's Signature.

Date *1<sup>st</sup> Sept 49.*

Have the foregoing descriptions and schedules been verified and found correct.

*YES*

Is this installation a duplicate of a previous case. *No* If so, state name of vessel *✓*

Plans. Are approved plans forwarded herewith. *No* If not, state date of approval *7<sup>th</sup> FEBRUARY 1949.*

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

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

*The electrical installation 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.*

*Noted in 20/10/49*

Total Capacity of Generators *25 ✓* Kilowatts.

The amount of Fee ...

£ *31 : 5*

When applied for,

*At GRK* 19

When received,

*✓* 19

Travelling Expenses (if any) £ *10*

*J. M. Spindler*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*GLASGOW*

*14 SEP 1949*

Assigned

*EE ACCOMPANYING MACHINERY REPORT*



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