

pt. 4d.

REPORT ON ELECTRIC PROPELLING MACHINERY

F.E. FROM ACCTS.	27/8/63
F.E. FROM ADMIN/F	✓
PLAN. No.	29785
TO RPTS. DEPT.	

Date of writing Report 12.6.63 When handed in at Local Office 2.7.63 Port of GRIMSBY
 No. in Reg. Book 58285 Survey held at GRIMSBY Date, First Survey 13th August, 1962 Last Survey 9th April, 1963
 No. of Visits 10
 Single on Twin Triple Quadruple } Screw vessel D.E.T. ATLANTIC DOLPHIN Tons { Gross 349 Net 124
 Built at Grimsby By whom built J. S. Doig (Grimsby) Ltd. Yard No. 69 When built 1963
 Ex-Admiralty Pattern Generators
 Electrical Machines made at By whom made Generator Nos. Reconditioned When made 1963
 Reconditioned by Messrs. Storhaven Eng. Co. Ltd. Newhaven Motor Nos.
 Shaft Horse Power at Full Power 900 Total Capacity of Generators 810 kilowatts
 Machinery Numeral as per Rule Owners Stogram Trawlers Ltd. Port belonging to LONDON
 Trade for which Vessel is intended Trawling

PLANS.— Have plans of the Machines, Control Gear, Cables and Circuits been submitted and approved Yes

STEAM ENGINES.— Type of Engine No. of Engines R.P.M. Is a Governor fitted Is the speed variation as per Rule when load is thrown off Is an Emergency Governor fitted Is it arranged for hand tripping Does it trip the throttle valve If exhaust steam is admitted, is an automatic shut-off fitted Is provision made for bleed steam and is a non-return or positive shut-off valve fitted Lubricating Oil.—State means provided for emergency supply Is the emergency supply sufficient to maintain lubrication as per Rule Mechanical Balance.—Are the Engines and Generators balanced so as not to cause appreciable vibration

OIL ENGINES.— Type of Engines Paxman Ricardo 6 RXS R.P.M. 800 Is a Governor fitted Yes Is the speed variation as per Rule when load is thrown off Yes Is an Emergency Governor fitted Yes Does it operate as per Rule Yes

GENERATORS.— Direct or Alternating Current D.C. No. of Generators 3 If A.C. state frequency at full load Kw. per Generator 270 Volts per Generator 180/220 Amps. per Generator 1250 Have certificates of works tests been supplied Yes and the results found as per Rule Yes Ventilation.—State how arranged (open or closed system) Open Are ventilating arrangements satisfactory Yes Heating when Idle.—What provision is made Facilities for Inspection and Repair.—Are these as per Rule Yes Are wear-down gauges supplied Bilges.—Are the arrangements to prevent accumulation of bilge-water under the machines satisfactory Yes

MOTORS.— S.H.P. per Motor at full power 900 No. of Motors 1 Single or double unit Double Volts per Motor 550 Amps. per Motor 1250 Have certificates of works tests been supplied Yes and the results found as per Rule Yes A.C. Motors.—Is provision made for machining the slip rings Do the Motors remain in synchronism under all normal conditions of running D.C. Motors.—If the system permits overspeeding at light loads are overspeed protection devices fitted

EXCITATION.— Is power for excitation taken from the ship's Auxiliary Generators No If so, state voltage and excitation amperes at full power kilowatts for excitation State excitation arrangements for Propulsion Generators Separately Excited off Constant Voltage Bus Bars supplied by Belt Driven Generators Saddle Mounted on Main Generators and Propelling Motors As for Propulsion Generators Is an alternative means of excitation provided Any One of Three Belt Driven Exciters Have certificates of works tests been supplied and found as per Rule

CONTROL.— Position of Main Control Panel Athwartships Forward End of E.R. Does it comply with the requirements regarding position Yes, grouping of controls Yes, instruments Yes, insulating materials (state type used) Sheet Steel Cubicles spacing and shielding of live parts Yes, accessibility Yes, position of fuses Yes, locking of screws and nuts Yes, labelling Yes, fuses for voltmeters, pilot lamps, etc. Yes, provision for manual operation of contactors, etc. (state method employed) Generators put in and out of Propulsion Loop by Manually Operated Drum Control Type Switch. Propulsion Motor fed through Hand Closed Circuit Breaker. earthing of instrument cases Yes, provision of renewable tips on switches subject to arcing Yes, capability of withstanding shock and inclination Yes, operation with high and low voltage Yes, rustproofing of parts Overload and Short Circuit Protection.—State means provided (1) Motor fed through Breaker fitted with overload trips. (2) Propulsion loop provided with overload relay which reduces excitation on overload condition. At what load is it set to operate (1) 150% with 10 second time lag. (2) 150% Instantaneous. Has it been tripped by hand when running at full power and found satisfactory Yes Are fuses of an approved type Yes

Earth Detection.—Is the main circuit provided with means for detecting earths Yes Are aural and visual alarms fitted Yes Is main power interrupted by an earth fault No If a limiting resistance is in the earth detecting circuit what is the ohmic value 1200 OHMS What earth leakage current is necessary to operate the device 5 Amps If a switch is used to disconnect the aural signal does it automatically give visual indication Yes Are the excitation circuits provided with means for earth detection Yes Mechanical Protection.—Are circuits above 250 volts D.C. or 150 volts A.C. to earth protected as per Rule Yes

Bridge or Deck Control.—Is bridge control provided Yes If so, from how many stations One can it be operated freely without producing currents or loads in excess of the working capacity of the plant Yes and without reference to electrical instruments Tachometer Is an emergency control provided in the engine room Yes and can the transfer to this control be made quickly in the engine room Yes Can the emergency control be rendered mechanically independent of the deck control Yes Instruments and Gauges.—State Instruments provided for each Generator 1-Voltmeter per Generator 1-Voltmeter per Exciter 1-Exciter Ammeter and for each Motor 1-Loop Ammeter Is an Insulation Tester provided

Discharge Protection.—Are all shunt field circuits protected as per Rule Yes D.C. Systems.—If the Generators are connected in series state means provided to prevent reversal of direction of rotation of the Prime Movers On failure of any Engine, Excitation is removed from its Generator by oil pressure switch. Are the Propulsion Generators also used alternatively for other purposes Yes If so, is provision made for overload protection, voltage adjustment, etc. Yes

Resistances.—Are resistances for synchronous motor fields insulated as
tc., fitted with temperature alarm.

Temperature Alarm.—Are machines with enclosed ventilating system, etc., fitted with temperature alarm..... —

SECONDARY BATTERIES.— Are Batteries used for starting Main Propulsion Engines.....No.....If so, have full particulars of rating been submitted and approved.....— Have they been tested under working conditions and do they give the required number of starts.....— Are they installed as per Rule.....— Are the charging arrangements satisfactory.....—

SPARE GEAR.— If engaged on open sea service has a list of spare gear been submitted and approved.....Yes..... Is a list of the articles supplied attached to this report.....—..... Are they stored as per Rule.....—.....

ELECTRIC PROPULSION EQUIPMENT CONDUCTORS

DESCRIPTION	CONDUCTORS		MAXIMUM CURRENT— AMPERES*			MAXIMUM VOLTAGE	INSULATED WITH	PROTECTIVE COVERING	
	No. in parallel per Pole	Sectional Area sq. in. or sq. mm.	In Circuit		Rule				
			When Running	When Manœuvring					
MAIN GENERATORS	2	91/103	1250	} Sustained	1360	220	Varnished Cambric	L.C.B.	
GENERATOR FIELDS	1	7/036	10		No	32	220	Butyl	-
MAIN MOTORS	2	91/103	1250	} Over-	1360	220			
MOTOR FIELDS	1	7/046	25		Loads	78	220	Butyl	-
CONTROL CIRCUITS									
OTHER CIRCUITS:—									

*For field circuits the "Hot" and "Cold" value should be given.

The foregoing is a correct description.

Electrical Engineers.

Date 15th. July 1963

COMPASSES.— Are Single-Conductor circuits carrying direct current arranged with lead and return Conductors fitted as close to one another as possible

Have the Compasses been adjusted under working conditions.

Builders' Signature.

Date _____

Is this machinery duplicate of a previous case

If so, state name of vessel.

GENERAL REMARKS.—(State quality of workmanship, opinions as to class, &c.) The Electrical Equipment of this vessel has been installed under Special Survey and the arrangements are in accordance with or equivalent to those shown on the approved plans and the Rules for Electrical Equipment.

The materials used are of good quality and the workmanship is good.

On completion the equipment was seen operating under working conditions during which time various protective devices were adjusted and operated. The insulation resistance of all circuits was measured and found good.

This installation is in my opinion suitable for a vessel to be classed with this Society.

Total capacity of generators for propulsion purposes..... 810 kilowatts.

The amount of FeeGms. A/c 355 - : -

Travelling Expenses (if any) ... £ : *None*

When applied for,

19...

When received,

19

Surveyor to Lloyd's Register of Shipping

Date _____

Committee's
Minute.....

FRIDAY 30 AUG 1963

Assigned

Date

Lloyd's Register
Foundation