

Rpt. 13.

No. 6282

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 22 FEB 1949

Date of writing Report 8 February 1949 When handed in at Local Office 19 Feb. 1949 Port of Oslo  
 No. in Survey held at Stavem and Oslo Date, First Survey 1st June 1948 Last Survey 18 Dec. 1948  
 Reg. Book. 58384 on the twin screw motor vessel "Esso 5" (ex Lancing Craft 926) (No. of Visits 5)  
 Tons { Gross 396  
 Net 101  
 Built at Parsley By whom built Fleming Ferguson Ltd Yard No. When built 1944  
 Owners A/S Østlandske Petroleumsselskab Port belonging to Oslo  
 Installation fitted by Fredrikvern Motorverksted A/S When fitted 1948  
 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 220  
 Heating Power 220 D.C. or A.C., Lighting D.C. Power A.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. Yes, 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. ✓ and the results found as per Rule. ✓

Position of Generators in engine room, one at centre, one on starboard side  
 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 in engine room on forward  
 bulkhead port side.  
 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. ✓, if of synthetic insulating  
 material is it an Approved Type. ✓, 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. a circuit-breaker with overload and reverse current  
 trips, and single pole equaliser switch. (The original arrangement has been retained,  
 made by Messrs. Adamson Green & Co. Ltd., Felling-on-Tyne)  
 and the switch and fuse gear (or circuit breakers) for each outgoing circuit fuse on each pole and double pole switch

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. Yes Instruments on main switchboard 2  
 ammeters. 2 voltmeters. 2 synchronising devices. For compound machines in parallel are the ammeters and reversed current  
 protection devices connected on the pole opposite to the equaliser connection. Yes Earth Testing, state means provided  
 2 pilot lamps for + and - pole  
 Switches, Circuit Breakers and Fuses, are they as per Rule. Yes, are the fuses an Approved Type. ✓  
 make of fuses. English Electric Co., are all fuses labelled. Yes If circuit breakers are provided for the generators, at what  
 overload do they operate. 10 amp., and at what current do the reversed current protective devices operate. 80 amps.

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. 8 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. cables laid on perforated steel plates.

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. ✓

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 Yes, are they adequately ventilated Yes state battery capacity in ampere hours 600 for starting of main engines.

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 if so, how are they protected ✓

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

Searchlight Lamps, No. of 2, whether fixed or portable, 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 Yes 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 ✓

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 ✓

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	Newcastle, Dunlop 1945	30	220	133	1100	oil eng.	Davey Paulmann
		Drip proof.						
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	30	1	50	125	99	60	Paper	Lead sheathed & armoured
" EQUALISER	30	1	50	125	99	60	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" GENERATOR								

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Main switchboard to sub. switchboard (A)	2	25	60	63	13	Paper	Lead covered & armoured
Sub. switchboard (A) to section board (B)	2	10	30	38	46	"	"
" to distr. board forward	2	25	60	63	260	V.I.R.	"
Section board B. to distr. board for nav. lights	2	4	10	22.5	36	"	"

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

DESCRIPTION.	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.			
Deck house accommodation	2	1.5	10	9.5	70	V.I.R.	Lead covered & armoured
Engine Room	2	10	24	38	39	"	"
Navigation lights	2	2.5	10	15.5	165	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	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.			
Cargo pump	1	7.4	2	25	60	63	250	220	Lead covered & armoured
capstan forward	1	10	2	25	60	63	250	240	"
capstan aft	1	10	2	16	60	49	85	65	"
Rizzo pump	1	7.4	2	16	60	49	46	33	"

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.

pr. Fredriksvaern Motorverksted A/S

*Jens Hyegaard.*

Electrical Contractors.

Date 16-2-49

COMPASSES

Have the compasses been adjusted under working conditions.

Yes

Builder's Signature.

Date

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

Yes

Is this installation a duplicate of a previous case.

✓

If so, state name of vessel

✓

Plans. Are approved plans forwarded herewith.

✓

If not, state date of approval

9/9/48

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

✓

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

This installation has been examined during construction and fitting onboard - The work has been carried out in accordance with the approved plans, and the workmanship throughout is good.

The main generators are as originally fitted in the vessel. These were now examined and tested as per Rules. The switchboard with subboards and sub-distrib. boards in engine room are as originally fitted, makes Adamson, New York, Felling-on-Tyne.

Switchboards & fittings, motors and control gear, cables examined and tested as per Rules.

The installation was tested under working conditions and found efficient.

The small hand generating set, Secretary letter E 4/6/48, has not been fitted, as the owners desire to have this requirement dispensed with, the auxiliary engines being utilised for charging up the batteries.

It is recommended that this installation be classed in the Register Book.

Total Capacity of Generators 60 Kilowatts.

The amount of Fee ...

£ 160.-

When applied for,

31/12/1948

When received,

8/1/1949

Travelling Expenses (if any) £

Surveyor to Lloyd's Register of Shipping.

*Phide*

FRI. 13 MAY 1949

Committee's Minute

Assigned

*See minutes on F.K. 2pt. (null)*

MADE AND PRINTED IN ENGLAND. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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