Rpt. 13. No. 88647

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 6TH June 1958. When handed in at Local Office 8.7.1958. Port of Glasgow.

No. in Reg. Book. Survey held at Grangemouth. Date, First Survey 22.4.58. Last Survey 13-5-1958 (No. of Visits 3)

43875 on the M.V. "Fred. Everard". Tons Gross 1542 Net

Built at Grangemouth By whom built Grangemouth Dockyard Co Ltd. Yard No. 514 When built 1958.

Owners Messrs F.T. Everard & Sons Ltd. Port belonging to LONDON

Installation fitted by Grangemouth Dockyard Co Ltd When fitted 1958

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

Plans, have they been submitted and approved Yes System of Distribution Two wire insulated 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 Negative 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 2-50 KW Generators, E/R Stbd 1-25 KW Generator, E/R Port

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 On raised platform, E/R port aft.

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 Syndanyo 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 T.P Circuit breaker with O/L and R/C protection Third pole is used as equaliser connection

and the switch and fuse gear (or circuit breakers) for each outgoing circuit D.P. Circuit breakers with O/L protection, D.P. Rotary switches and fuses & D.P. Knife switches and fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 3 ammeters 3 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 No, and tested —

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes make of fuses Artic and GEC, are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 150% FL. CURRENT, and at what current do the reverse current protective devices operate 15% F.L. 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 <6% B.B. volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends —

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.L.C. VRILC. VIR in Conduit, galleys VRI LC and laundries —. State how the cables are supported or protected Clipped on perforated steel trays, Clipped on metal or wood framework, run in pipes or conduit.

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 —

004971-004981-0274

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. **Emergency Supply**, state positi
—

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches and fuses Yes. Are the switches and fuses
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, fitted and adequately ventilated as per Rule —, state battery capacity
ampère hours —. Where required to do so does it comply with 1948 International Convention —
Lighting, is fluorescent lighting fitted No. If so, state nominal lamp voltage — and compartments where lamps are fitted —
—

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

Searchlights, No. of NONE, whether fixed or portable —, are they of the carbon arc or of the filament type —.
Heating and Cooking, is the general construction as per Rule Yes, are the frames effectually earthed Yes, are heaters in th
accommodation of the convection type None. **Motors**, are all motors constructed and installed as per Rule and placed in well-ventilate
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 pum
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 Yes
Lightning Conductors, where required are they fitted as per Rule —
Ships carrying Oil having a Flash Point of less than 150° F. Have all the special requirements of the Rules for such ships been complie
with —, are all fuses of an Approved Cartridge Type —, make of fuse —. Are the fittings for pum
rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships —. Are all cables lead covered as per Rule —.
E.S.D., if fitted state maker Kelvin + Hughes location of transmitter and receiver FRAME SPACE 84-85.
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 Kw. per Generator	Volts.	Ampères.	Revs. per Min.	PRIME MOVER. TYPE.	MAKER.
MAIN	2	Lawrence Scott	50	220	227	950	Oil	The Newbury Diesel Co
	1	" "	25	"	114	"	"	"
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS. No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES. In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
MAIN GENERATOR	2	50	1	37/103	227 ✓	240	140	V.R	L.C.
" " EQUALISER			1	37/072	— ✓	132	70	"	"
" "	1	25	1	19/083	114 ✓	118	80	"	"
"			1	19/064	— ✓	83	40	"	"
EMERGENCY GENERATOR									
ROTARY TRANSFORMER : MOTOR ...									
" " GENERATOR									

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	CONDUCTORS. No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES. In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.

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

DESCRIPTION.	CONDUCTORS. No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES. In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Midship + Ford Lighting + Heating	1	19/052	33·5 ✓	64	360	VR	PIPE
Lub oil Heater	1	7/052	36 ✓	37	130	"	LC
Aft Accom.^n Lighting	1	7/052	26 ✓	37	60	"	"
Crew Boilers + Heaters	1	7/044	27 ✓	31	60	"	"
Navigation + Instruments	1	7/036	15·5 ✓	24	480	"	PIPE
Wireless	1	7/052	14 ✓	37	420	"	"
E/R Lighting	1	3/036	7 ✓	10	60	"	LC

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
WINDLASS	1	31	1	37/072	119 ✓	152	480	VR	PIPE
STANDBY LUB-OIL PUMP	1	20	1	19/064	72 ✓	83	130	"	L.C.
CAPSTAN	1	17	1	19/064	68 ✓	83	100	"	"
Air Compressor	1	16	1	19/052	64 ✓	64	40	"	"
Ballast Pump	2	11	1	7/064	45 ✓	46	130	"	"
Steering Gear	1	7	1	7/044	30 ✓	31	130	"	"
Oil Fuel Transfer Pump	1	1·5	1	3/036	7·8 ✓	10	70	"	"
" " Purifier	1	0·5	1	3/029	2·8 ✓	5	50	"	"
Lub oil "	1	0·5	1	3/029	2·8 ✓	5	130	"	"
F.W Pump	1	1·5	1	3/036	7·2 ✓	10	40	"	"
M.E. Exhaust Blower	2	5	1	7/036	20·5 ✓	24	80	"	PIPE.

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.

18/8/58

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.

THE GRANGEMOUTH DOCKYARD COY. LTD.

A. Liddell — Managing Director

Electrical Contractors. *Date*

THE GRANGEMOUTH DOCKYARD COY. LTD.

A. Liddell — Managing Director

COMPASSES.

Have the compasses been adjusted under working conditions

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 YES *If so, state name of vessel* M.V. "SANGUITY"

Plans. *Are approved plans forwarded herewith* No *If not, state date of approval* 10-7-56

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 installation has been fitted on board under special survey, tested under working conditions and found satisfactory. The material and workmanship are good.

Total Capacity of Generators 125. *Kilowatts*

The amount of Fee ... £ 60 : 15 :

Travelling Expenses (if any) £ 1 : 2 :

When applied for, ~~12 AUG 1958~~

When received, 19

F. P. Brown

Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 AUG 1958

Assigned SEE ACCOMPANYING MACHINERY REPORT

(*The Surveyors are requested not to write on or below the space for Committee Minute.*)

5m.6.56—Transfer. (MADE AND PRINTED IN ENGLAND)

13/6/58.

15/7/58

15.8.58