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Rpt. 13. No. 114465

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 10 JUL 1957

Date of writing Report 3rd July 19 57 When handed in at Local Office 3 JUL 1957 19 Port of NEWCASTLE-ON-TYNE.

No. in Reg. Book. Survey held at SOUTH SHIELDS. Date, First Survey Dec. 1st 1956 Last Survey June 27th 19 57 (No. of Visits 12)

on the S.S. "ESSO WANDSWORTH" Tons Gross 4352 Net

Built at DULUTH, MINNESOTA By whom built Barnes, Duluth S.B.Co. Yard No. - When built 1943

Owners Esso Petroleum Co. Limited. Port belonging to LONDON

Installation fitted by Barnes - Duluth S. B. Company. When fitted 1943

Is vessel equipped for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D Yes Gy.C No ~~Steering~~ D.G. Yes Radar Decca

Plans, have they been submitted and approved not built under Survey System of Distribution Two wire Voltage of Lighting 110

Heating - Power 110 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 - Position of Generators Engine Room floor level aft of main engine.

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 Engine Room floor level, adjacent to after bulkhead and 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 Dead Front, 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 Manually operated double pole circuit breaker with 2 O/L's and time lags and reverse current trip and triple pole isolating switch.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Double pole switch and fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 4 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 American Standard make of fuses American Std. Cartridge are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate Tested at 100% Set at 150% F.L., and at what current do the reverse current protective devices operate 15% F.L. Cables, are they insulated and protected as per Rule Main cables & new installation only. if otherwise than as per Rule are they of an Approved Type L.O. letter 6.9.56 state maximum fall of pressure between bus bars and any point under maximum load Less than 6% 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 -, if so, are they adequately protected - State type of cables (if in conduit this should also be stated) in machinery spaces V.C. L.A., galleys V.C. L.A. & R.C.L.A. L.O. Letter 6.9.56. and laundries - State how the cables are supported or protected Main run V.C. L.A.B. through pipes on deck. Accommodation and machinery spaces cables clipped to metal trays, metalwork 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 -

004727 - 004735 - 0092½

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, fitted and adequately ventilated as per Rule - *, state battery capacity in 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 - *, 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 - *, 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 -

Lightning Conductors, where required are they fitted as per Rule Steel masts and top masts

Ships carrying Oil having a Flash Point of less than 150° F. Have all the special requirements of the Rules for such ships been complied with Yes L.O. letter 6.9.56. *, are all fuses of an Approved Cartridge Type* Yes *, make of fuse* American Std. Cartridge *Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships* L.O. Letter L.O. letter 6.9.56. *Are all cables lead covered as per Rule* 6.9.56.

E.S.D., if fitted state maker Marconi *location of transmitter and receiver* Forward Pump Room Centre Frame Nos: 158 - 159

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.	Amperes.	Revs. per Min.	PRIME MOVER. TYPE.	MAKER.
MAIN	2	G.F. STURTEVANT	10	110	91	450	STEAM	STURTEVANT & CO.
	1	TROY ENG. & MACH. CO.	15	120	125	450	STEAM	STURTEVANT & CO.
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	10	1	.055	91 ✓	125	36	V.C.	L.C.A.
" " EQUALISER			1	.055	- ✓	125	36	V.C.	L.C.A.
	1	15	1	.055	125 ✓	125	36	V.C.	L.C.A.
			1	.055	125 ✓	125	36	V.C.	L.C.A.
EMERGENCY GENERATOR									
ROTARY TRANSFORMER : MOTOR									
" " GENERATOR									

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

DESCRIPTION.								
Shore connection box	1	2c-.0521	100 ✓	125	260	V.C.	L.C.A.
Degaussing supply	1	2c-19/.052	75 ✓	110	216	"	L.C.B.
Radio supply	1	2c- 7/.064	30 ✓	80	800	"	L.C.A.
Battery Charging	1	2c-.0051	5 ✓	20	80	"	"
Radar Supply	1	2c-3/.036	5 ✓	10	90	V.I.R.	L.C.A.B.

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.
Forward quarters ltg. D.B.	P.2	1	2c-19/.064	78 ✓	83	860	V.I.R.	L.C.A.B.
Aft quarters ltg. D.B.	P.5	1	2c-.0329	80 ✓	100	130	V.C.	L.C.A.
Pilot House panel D.B.	P.8	1	2c- 7/.044	13 ✓	45	860	"	L.C.A.B.
Engine Rm. & Blr. Rm. Ltg. D.B.	P11	1	2c-.0206	15 ✓	46	80	"	L.C.A.
Steering room & Aft Acc." D.B.	P12	1	2c-.0206	15 ✓	46	80	"	"
Navigation Ltg. (Fed from P.8)		1	2c-.0051	5 ✓	20	40	"	"
Bosuns Stores Panel (Fed from P.2)		1	2c-.0130	20 ✓	50	140	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P							
Refrig. Compressor	1	5	1	2c-.0329	36 ✓	100	70	V.C.	L.C.A.B.
Telegraph convertors	2	1/2	1	2c-.0051	5 ✓	18	40	"	"
Drill	1	1/2	1	2c-.0051	5 ✓	18	64	"	"
Grinder	1	1/2	1	2c-.0051	5 ✓	18	60	"	"
Fresh Water pump	1	1/2	1	2c-.0051	5 ✓	18	60	"	"

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

30/7/57

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.

..... *Electrical Contractors.* *Date*.....

COMPASSES.

Have the compasses been adjusted under working conditions.....

..... *Builder's Signature.* *Date*.....

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

Is this installation a duplicate of a previous case.....YES..... *If so, state name of vessel*.....ESSO CHELSEA, ESSO LAMBETH, & ESSO FULHAM.

Plans. *Are approved plans forwarded herewith*.....YES..... *If not, state date of approval*.....—

Certificates. *Are certificates of test for motors engaged on essential sea services and generators forwarded herewith*.....NOT AVAILABLE. VESSEL NOT BUILT TO CLASS

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

The Electrical Equipment of this Vessel, was fitted on board under American Bureau Survey, has now been examined throughout, seen under working conditions and found to be satisfactory. The equipment, as installed, is in our opinion, suitable for a Class Ship.

Total Capacity of Generators.....35..... *Kilowatts.*

The amount of Fee ... ... £ 12 : 0 :

When applied for, ...19.....

When received, ...19.....

Travelling Expenses (if any) £ : :

J. Hancock.

Surveyor to Lloyd's Register of Shipping.

J. HANCOCK.

Committee's Minute.....FRIDAY 9 AUG 1957

Assigned.....See Rpt. 8.

5m.8,56—Transfer. (MADE AND PRINTED IN ENGLAND)

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