

14 SEP 1953

Rpt. 13.

No.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of Bremen

No. in Survey held at Bremerhaven Date, First Survey 17.4.53. Last Survey 11.8.1953

Reg. Book. (No. of Visits 12) 13074

59011 on the S.S. "ESSO BELFAST" Tons Gross 13074 Net 7864

Built at Kiaming N.Y. U.S.A. By whom built Federal SB & DD Co., Inc. Yard No. When built 1930.

Owners Esso Petroleum Co., Port belonging to London

Installation fitted by When fitted 1930.

Is vessel equipped for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. Yes Radar Yes

Plans, have they been submitted and approved System of Distribution Two-wire Voltage of Lighting 110.

Heating 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 Yes 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

positive 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 Starboard side of engine-room, second platform.

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 Starboard side of

engine room second platform.

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 Vulcanite composition, 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 Double pole main and single pole equaliser

switches. No reverse current trip switch on 300 KW dynamo.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Overload Double pole trip switches

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 reversed current

protection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided + and

- lamps.

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes

make of fuses Wecker's Extra, are all fuses labelled Yes If circuit breakers are provided for the generators, at what

overload do they operate 1,600 amps, 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, are the ends of all cables having a sectional

area of 0.01 square inch and above provided with soldering sockets. Part-soldered Part-strapped Are all paper insulated and varnished cambric insulated

cables sealed at the ends No, fitted. 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 trays and clips, conduit.

Are all lead sheaths, armouring and conduits effectively bonded and earthed No 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 Yes

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

Navigation Lamps, are they separately wired ☒ controlled by separate double pole switches and fuses ☒ Are the switches and fuses in a position accessible only to the officers on watch ☒ Is an automatic indicator fitted ☒ Is an alternative supply provided ☒

Secondary Batteries, are they constructed and fitted as per Rule. ☒ None, are they adequately ventilated ☒ state battery capacity in ampere hours.

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

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 ☒ main pump room: system type lights with heavy glass fronts. Frid. pump room and centre console: explosion proof glass covers and metal guards. Are all fittings suitably ventilated ☒

Searchlight Lamps, No. of 1-24, 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 ☒

Are motors coupled to oil fuel ☒ 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 ☒

Control Gear and Resistances, are they constructed and fitted as per Rule ☒ 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 ☒

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	Westinghouse	300.	240	1,250	1,200	St. Turbine.	De Laval.
	1	Westinghouse	175	240.	"	"	"	By H.P. main turbine.
EMERGENCY	✓							
ROTARY TRANSFORMER	2	Westinghouse	25	120.	208	1,750	"	"

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.	In the Circuit.	Rule.			
MAIN GENERATOR No. 1 + 2.	300.	3	.62 x 3	1250	1170.	66.	VRI.	LCAB.
" EQUALISER								
attached dynamo to H.P. turbine shaft -	175.							
Note: - attached dynamo disconnected from drive and is not used.								
EMERGENCY GENERATOR	✓							
ROTARY TRANSFORMER: MOTOR	29	1	.15	146	150	12	VRI.	LCAB.
" GENERATOR	25	1	.15	208	150	48	"	"

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

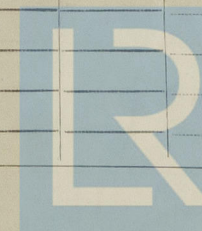
DESCRIPTION.								
Midship + forecabin	1	.1682	160.	165	700.	VRI.	LCAB.	
Upper deck	1	.06	35	80	200.	"	"	
Platter deck.	1	.06	60.	80.	250	"	"	
Boiler room	1	.0093	25	29.	80	"	"	
Engine room	1	.09	100.	125.	150.	"	"	
Radios	1	.06	65	80.	750	"	"	
Radar.	1	.0388	60.	63	800.	"	"	
Vent system No. 1	1	.1088	95	125.	60	"	"	
- do No. 2	1	.1088	80	125.	60.	"	"	
Galley.	1	.325	200	255.	350.	"	"	
Machine shop.	1	.0388	63.	63.	200	"	"	

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.	In the Circuit.	Rule.			
Wireless.	1	.007	10	24	30	VRI.	LCAB.
Navigation lights.	1	.007	10	24	60.	"	"
Lighting	1	.007	10	24	"	"	LC.
Cargo motor handles	1	.0225	30	46	60	"	LCAB.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Main feed pump.	1	60	1	.01863	250	175	150	VRI
Aux " "	1	20/45	1	.0775	58/180	99	150	"
Condensate "	1	15	1	.06	56	80	180	"
Fuel oil "	1	3.	1	.0093	12.5	29	180	"
Lub oil circ "	1	15	1	.06	58	80	180	"
Main circ "	1	40/50	1	.232	180	205	100	"
Aux circ "	1	20	1	.1472	75	150	100	"
Bilge "	1	10	1	.06	38	80	100	"
Sanitary No. 1	1	15/20	1	.0388	60/75	63	100	"
" No. 2	1	5	1	.0093	18.5	29	100	"
Main Cargo No. 1	1	200	2	.35	650	500	180	"
" No. 2	1	200	2	.35	650	500	180	"
" No. 3	1	200	2	.35	650	500	180	"
Cargo stripping "	1	60	1	.1472	18/227	150	180	"
L.O. cooler "	1	5	1	.0093	20	29	80	"
F.D. fan "	1	15	1	.0388	60	63	60	"
I.D. fan "	1	20	1	.0388	75	63	80	"
Steering No. 1 motor.	1	20	1	.1088	75	125	250	"
" No. 2	1	20	1	.1088	75	125	250	"
Refrig. motor.	1	5	1	.0225	19	40	80	"
L.O. Separator motor.	1	2	1	.0093	7.8	29	150	"
Work-water pump.	1	1	1	.0093	6.5	29	150	"
Drinking "	1	0.5	1	.0062	2.5	22.5	80	"
Vent fans No. 1	8	1.8	1	.1088	7.8	125	"	"
" No. 2	4	1.6	1	.1088	23.5	125	"	"
Air compressor.	1	25	1	.0388	74	63	150	"
Winches.	1	75	1	.62	275	390	1100	"
apt wind	1	25	1	.08	96	110	600	"
Wind. wind.	1	25	1	.08	96	110	900	"
Winch wind.	1	25	1	.08	96	110	350	"
ME turning motor	1	10	1	.0225	30	40	60	"



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Lloyd's Register Foundation

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.....If so, state name of vessel.

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

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.) The installation

has been examined and the insulation resistance, including motor and dynamo, tested and found satisfactory.

The workmanship and the condition of the materials appear good.

Total Capacity of Generators		600	Kilowatts.
The amount of Fee ... £		50	
Travelling Expenses (if any) £			
Committee's Minute			

Assigned See Bur. Rpt. 4a.