

Rpt. 13.

No. 106343

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

20 JUL 1949

Date of writing Report 27.6.49 19... When handed in at Local Office 4-JUL 1949 Received at London Office... Port of Newcastle-on-Tyne

No. in Survey held at Hebburn-on-Tyne Date, First Survey 2.2.49 Last Survey 17.6.49

Reg. Book. m.v. "LATIRUS" (No. of Visits 13)

on the... Tons { Gross... Net... }

Built at Hebburn-on-Tyne By whom built R. & W. Hawthorn Leslie & Co. Ltd. Card No. 699 When built 1949

Owners Anglo Saxon Petroleum Co. Ltd Port belonging to London

Installation fitted by R. & W. Hawthorn Leslie & Co. Ltd When fitted 1949

Is vessel equipped for carrying Petroleum in bulk yes Is vessel equipped with D.I. yes E.S.D. yes Gy.C. yes Sub.Sig. no Radar no. no

Plans, have they been submitted and approved yes System of Distribution 2-wire insd. 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,

if not compound wound state distance between generators - and from switchboard - Are the generators arranged to run

in parallel no, 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 yes and the results found as per Rule yes

Position of Generators engine room star board on raised stools

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 angle framework near

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 Thick matt. "Sindanyo", 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 a double pole quick break knife switch and double

pole fuse.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit as for generators

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 2

ammeters 2 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 - Earth Testing, state means provided E. lamps

coupled to E through switches and fuses

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

make of fuses 'ZED', are all fuses labelled yes If circuit breakers are provided for the generators, at what

overload do they operate - 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 less than 6.v. 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 no, if so, are they

adequately protected - 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 Main feeders along fore and aft

gangway clipped under hardwood cleats to steel troughing: In accommodation, L.C. cables

on the surface and protected where necessary by wood or metal guards.

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 yes

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Lloyd's Register Foundation

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. - 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. yes

Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. yes if so, how are they protected. "WIGAN" flameproof lighting fittings as approved installed in centrecastle.

and where are the controlling switches fitted. in officers quarters Are all fittings suitably ventilated. yes

Searchlight Lamps, 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. yes

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. yes, are all fuses of an Approved Cartridge Type. yes, make of fuse. "ZED" Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships. yes Are the cables lead covered as per Rule. yes

E.S.D., if fitted state maker. Marconi Location of transmitter. Engine Rm and receiver. Chart Rm.

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				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Rev. per Min.	TYPE.	MAKER.
MAIN	I	Sund. Forge Co.	30	110	273	675	Steam	Sund. Forge Co. Ltd.
	I	Sund. Forge Co.	30	110	273	675	Diesel	Ruston & Hornsby
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	2	I	37/.083	273	296	120/90	V.C.	L.C.A.B.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

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

DESCRIPTION.								
Midships sub-switchboard	I	37/.103	304.6	385	540	V.C.	L.C.A.B.	
Bridge Dk. Star. Section Box	I	19/.064	125.25	135	60	"	L.C.	
Forecastle Section Box	I	19/.052	5.4	104	390	"	L.C.A.B.	
Poop Dk. Star. Section Box	I	19/.052	38.7	104	150	"	"	
Upper Dk. Star. Alleyway Section Box	I	19/.052	46.2	104	120	"	"	
Engineers Workshop Section Box -4.	I	19/.064	102.4	135	210	"	"	
ditto	-5.	I	19/.052	63.6	104	90	"	"

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.			
D.B.I. Chart Room	I	19/.052	32.4	104	90	V.C.	L.C.
" 2. Upper Bridge	I	7/.044	19.05	31	60	V.I.R.	"
" 3. Bridge Dk. Port	I	7/.044	19.	31	60	"	"
" 3a ditto	I	7/.064	27.2	46	60	"	"
" 4 ditto Star.	I	7/.044	21	31	60	"	"
" 5 ditto Port.	I	7/.044	13.1	31	70	"	"
" 6 Upper Dk. Star. Alleyway	I	7/.036	17.1	24	30	"	"
" 7 " Port "	I	7/.064	29	46	150	"	"
" 8 " Star. "	I	7/.036	10	24	150	"	L.C.A.B.
" 9 Poop Dk. Star. Passage	I	7/.064	24.7	46	30	"	L.C.
" 9a " Port "	I	7/.036	14	24	120	"	"
" 10. Second Dk. Starboard	I	7/.036	16	24	90	"	L.C.A.B.
" 11. Engineers Workshop	I	7/.036	12.3	24	180	"	"
" 12. Second Dk. Starboard	I	7/.036	8.2	24	60	"	"
" 13. Engineers Workshop	I	7/.036	11	24	180	"	"
" 14. Fwd Starboard	I	7/.036	8.7	24	60	"	"
" 15. Fwd Port	I	7/.036	7.1	24	180	"	"
" 1a. Chart Room	I	19/.052	20.73	104	12	V.C.	L.C.
" 0. Forecastle	I	7/.036	5.4	24	30	V.I.R.	L.C.A.B.
Navigation Main Supply	I	7/.036	1.8	24	90	"	L.C.
ditto. Alternative Supply	I	7/.036	-	24	30	"	"
D.B.I. Bridge Dk. Starb.	I	7/.064	30	46	60	"	"

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.			
Turning Gear Motor	I	15	I	19/.064	100	135	150	V.C.	L.C.A.B.
Fuel Oil Purifiers	2	7.5	I	19/.052	60	104	2/90	"	"
Fresh Water Pump	I	5/4	I	7/.029	7.5	15	180	V.I.R.	"
Lub. Oil Purifier	I	2 1/4	I	7/.064	22	46	120	"	"
Standby Fuel Oil Pump	I	2 1/4	I	7/.044	19	31	60	"	"
Lathe Motor	I	3	I	7/.044	25.4	31	60	"	"
Drilling Machine	I	2	I	7/.044	17	31	60	"	"
Grinder	I	2	I	7/.044	18	31	50	"	"
Booster Pump	I	1/2	I	3/.029	3	5	60	"	"
Galley Supply Fan	I	.6	I	3/.036	5.8	10	180	"	L.C.
Galley Exhaust Fan	I	.6	I	3/.036	5.8	10	180	"	"
Galley Potato Peeler	I	.6	I	3/.036	5.8	10	150	"	"
Pleno Vent Fans	2	5.6	I	19/.052	45	104	2/20	V.C.	L.C.A.B.
Pantry Exhaust Fan	I	.6	I	3/.036	5.8	10	120	V.I.R.	L.C.
Store Room Supply Fan	I	.6	I	3/.036	5.8	10	90	"	"
Pantry Booster Motor	I	1/2	I	3/.029	3.2	5	30	"	"
Domestic Refrig. Motor	I	1/2	I	3/.036	5.2	10	30	"	"
Axial Flow Fan in E.R. Vent	I	.3	I	3/.029	3.2	5	60	"	"

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.

C. Stephenson Electrical Contractors. Date 28.6.49.

COMPASSES.

Have the compasses been adjusted under working conditions.

C. Stephenson Builder's Signature. Date 28.6.49.

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

Is this installation a duplicate of a previous case. **no** If so, state name of vessel. -

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. **yes**

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

The electrical equipment of this vessel has been installed under special survey in accordance with the approved plans and the special requirements of Section 15 of the "Rules For Electrical Equipment". The materials and workmanship are good. Upon completion trials of the equipment were carried out with satisfactory results and the insulation resistance of all circuits was measured and found good. This equipment is in my opinion suitable for a classed vessel.

Noted *Edw* 8/8/49

Total Capacity of Generators (2x30) 60 Kilowatts.

The amount of Fee ... £ 49 : 0 : { When applied for, 19 JUL 1949
 Slade
 When received, 19
 Travelling Expenses (if any) £ : : 19

B. D. [Signature]
 Surveyor to Lloyd's Register of Shipping.

FRI. 12 AUG 1949

SUNDERLAND.

Committee's Minute.

Assigned *See F.E. nely. rpt.*

