

REPORT ON ELECTRICAL EQUIPMENT

MAY 1953

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 19... When handed in at Local Office 5th May 1953. Port of Middlesbrough.

No. in Survey held at Southbank-on-Tees. Date, First Survey 6. 12. 52 Last Survey 24. 4. 53. Reg. Book. (No. of Visits 15)

95983 on the M. V. "SILVERBROOK."

Tons { Gross... Net...

Built at Southbank-on-Tees. By whom built Smith's Dock Co. Ltd. Yard No. 1225 When built 1953.

Owners Silver Line Limited Port belonging to London.

Installation fitted by R. Pickersgill & Son Ltd. Stockton-on-Tees. When fitted 1953.

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. - Radar. Yes.

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

Heating 110 Power 110 D.C. or A.C., Lighting A.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.

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 Port and starboard on

generator flat, forward, and above starting platform level.

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. Athwartships on

generator flat facing 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. 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. Triple Pole Air Break Circuit Breaker with

Overloads, Time Delays on two poles, Reverse current Trip, and third pole coupled to

equaliser. Double Pole Air Break Circuit Breaker with Overloads and Time Delays on Aux. Generator.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. Double Pole Double Throw Quick Break

Knife Switch and Double Pole 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

coupled to 'E' thro switches & fuses. Preference Tripping, state if provided. - and tested. -

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

make of fuses. Simons 'Z', are all fuses labelled. Yes. If circuit breakers are provided for the generators, at what

overload do they operate. 10%, and at what current do the reverse current protective

devices operate. 15%. 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. 26.6 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. Yes, if so, are they adequately protected. Yes. State

type of cables (if in conduit this should also be stated) in machinery spaces. L.b.A. + B. galleys. L.b.A. + B.

and laundries. L.b.A. + B. State how the cables are supported or protected. cables in machinery spaces clipped

to either perforated or solid steel way plate. Forward mains clipped to solid steel plate along

port side of gangway. Pump Room cables clipped to way plate. L.b. cables in accommodation

channel to wood grounds.

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.

Have refrigeration fan motors been constructed under survey. - and test certificates supplied. -

Are the motors accessible for maintenance at all times. -

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. Yes state battery capacity in ampere hours — Where required to do so does it comply with 1948 International Convention —

Lighting, is fluorescent lighting fitted. — 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. Yes are the frames effectually earthed. Yes 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

Lightning Conductors, where required are they fitted as per Rule. Yes

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

E.S.D., if fitted state maker Mancini location of transmitter and receiver Frames 43/44 Port & Starboard

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.	
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	Sunduland Forge & Eng. Co. Ltd. nos. 44618-9	50	110	454	500	Steam	W. H. Allen & Sons & Co. Ltd.
EMERGENCY ROTARY TRANSFORMER	1	Sunduland Forge & Eng. Co. Ltd. no. 45242	35	110	319		Diesel.	International Eng.

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	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	1	50	1	61/093	454	492	100	V.b.	L.b.A. + B.
"	1	50	1	34/103	227	408	50	V.b.	L.b.A. + B.
"	1	50	1	61/093	454	492	100	V.b.	L.b.A. + B.
"	1	35	1	34/103	227	408	50	V.b.	L.b.A. + B.
EMERGENCY GENERATOR	1	35	1	34/103	319	408	240	V.b.	L.b.A. + B.
ROTARY TRANSFORMER: MOTOR									
"									

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

DESCRIPTION.	No. of	Kw.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Shore Supply to main switchboard.	1		34/103	350	408	150	V.b. L.b.A. + B.
main switchboard to 8KW Bakis Oven	1		19/044	42.6	92	210	V.b. L.b.A. + B.
main switchboard to Engine Room S.B. 4	1		19/052	105	110	10	V.b. L.b.A. + B.
main switchboard to Engine Room S.B. 2	1		19/052	92	110	20	V.b. L.b.A. + B.
main switchboard to Bridge Space S.B. 8	1		19/064	69.5	143	300	V.b. L.b.A. + B.
S.B. 8 to Laundry D.B. 14	1		19/044	24.5	92	150	V.b. L.b.A. + B.
D.B. 14 to Laundry Washers (2)	1		3/036	3.2	10	15	V.I.R. L.b.A. + B.
D.B. 14 to Iron Sockets Outlets (2)	1		3/036	9	10	15	V.I.R. L.b.A. + B.
main switchboard to Engine Room S.B. 3	1		4/064	48	80	6	V.b. L.b.A. + B.
S.B. 3 to Engine Room D.B. 13	1		4/036	18.2	24	30	V.I.R. L.b.A. + B.
S.B. 3 to Engine Room D.B. 12	1		4/036	14	24	120	V.I.R. L.b.A. + B.
S.B. 3 to Engine Room D.B. 11	1		4/036	16	24	120	V.I.R. L.b.A. + B.
main switchboard to Wireless	1		19/064	18	83	660	V.I.R. L.b.A. + B.
main switchboard to midship switchboard	1		34/103	259	408	600	V.b. L.b.A. + B.

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

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.			
main switchboard to Starboard Eng. Pasing S.B. 5	1	19/044	69	92	120	V.b.	L.b.A. + B.
S.B. 5 to Poop Deck Stbd.	1	4/044	20	31	120	V.I.R.	L.b.
S.B. 5 to Poop Deck Port.	1	4/044	19.5	31	120	V.I.R.	L.b.
S.B. 5 to Upper Deck Starboard.	1	4/044	14	31	145	V.I.R.	L.b.
S.B. 5 to Upper Deck Port.	1	4/044	15	31	160	V.I.R.	L.b.
main switchboard to Galley S.B. 4	1	4/064	40.4	80	210	V.b.	L.b.A. + B.
S.B. 4 to Galley Vent Fans (2)	1	3/036	10	10	30	V.I.R.	L.b.A. + B.
S.B. 4 to Galley Exhaust Fan.	1	3/036	5.7	10	60	V.I.R.	L.b.A. + B.
S.B. 4 to Galley Sockets Outlets	1	4/029	15	15	30	V.I.R.	L.b.A. + B.
main switchboard to Engine Room S.B. 6	1	19/064	57	143	120	V.b.	L.b.A. + B.
midships board to Radar.	1	4/052	30	60	210	V.b.	L.b.
midships board to Navigation C.O. Switch	1	3/036	2.4	10	210	V.I.R.	L.b.
Alternative supply to Navigation C.O. Switch	1	3/036	2.7	10	20	V.I.R.	L.b.
C.O. Switch to Navigation Indicator	1	3/036	2.7	10	6	V.I.R.	L.b.
midship board to Bridge D.B. '0'	1	4/036	10	24	120	V.I.R.	L.b.
D.B. '0' to Kettle Sockets Outlets	1	3/036	6	10	30	V.I.R.	L.b.
D.B. '0' to Echo Sounder.	1	4/029	4	15	60	V.I.R.	L.b.
midship board to Panty D.B. '3'	1	4/036	24	24	60	V.I.R.	L.b.
midships Panty D.B. '3' to 20astin.	1	3/036	7	10	30	V.I.R.	L.b.
D.B. '3' to Coffee Purculator.	1	3/036	7	10	30	V.I.R.	L.b.
D.B. '3' to Electric Refrigerator.	1	3/036	4	10	30	V.I.R.	L.b.
midships board to Upper Bridge Dk. D.B. 1	1	4/036	16	24	120	V.I.R.	L.b.
midships board to Lower Bridge Dk. D.B. 2	1	4/044	16	31	210	V.I.R.	L.b.
midships board to Starboard Bridge Dk. D.B. 4	1	4/044	15	31	120	V.I.R.	L.b.
midships board to Port Bridge Dk. D.B. 5	1	4/044	21.4	31	180	V.I.R.	L.b.
midships board to Surg. Canal Projector	1	19/044	30	92	456	V.b.	L.b. + L.b.A. + B.
midships board to Gun Compass	1	4/036	10	24	180	V.I.R.	L.b.
midships board to Wheelhouse D.B. 6	1	4/064	41	80	180	V.b.	L.b.

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.
Refrigerator Motor.	1	4.0	1	4/052	35	60	10	V.b. L.b.A. + B.
Refrigerator Pump Motor.	1	1.0	1	4/029	10	18	10	V.I.R. L.b.A. + B.
Engine Room Vent Fan.	1	2.0	1	4/044	18	31	120	V.I.R. L.b.A. + B.
Boiler Room Vent Fan.	1	2.0	1	4/044	18	31	180	V.I.R. L.b.A. + B.
Oil Fuel Pump.	1	1.0	1	4/029	10	15	150	V.I.R. L.b.A. + B.
Grinder	1	3.0	1	4/044	26	31	120	V.I.R. L.b.A. + B.
Lath	1	3.0	1	4/044	26	31	120	V.I.R. L.b.A. + B.
Oil Purifiers	3	4.0	1	4/052	35	60	90	V.b. L.b.A. + B.
Alarm.	1	3.0	1	4/052	26	60	180	V.b. L.b.A. + B.
Accom. Vent Fan.	1	3.5	1	4/064	31	80	150	V.b. L.b.A. + B.
Drumming Gear Motor	1	18	1	19/064	130	143	120	V.b. L.b.A. + B.
Midships Vent Fan.	1	3.5	1	4/052	31	60	210	V.b. L.b.
Salt Water Pumps.	2	1.0	1	3/036	4	10	120	V.I.R. L.b.A. + B.

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

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.

RICHARD PICKERSGILL & SONS, LTD.

Electrical Contractors.

Date 28/4/53

COMPASSES.

Have the compasses been adjusted under working conditions.

YES.

For G.M. HENDERSON & CO. LTD.

Builder's Signature.

Date 30-4-53.

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 and materials, opinions as to class, etc.)

The electrical equipment on this vessel has been installed under special survey and the arrangements are in accordance with or equivalent to those shown on the approved plans and the Rules for Electrical Equipment.

The materials used are of good quality and the workmanship is good.

On completion the equipment was operated under working conditions, the various protective devices were adjusted and operated, and the insulation resistance of all circuits measured and found good.

This installation is in my opinion suitable for a classed vessel intended for the carriage of petroleum in bulk.

Special Notation: D.F., E.S.D., Gyro C and Radar.

Note: This vessel is fitted with Degaussing Equipment.

Total Capacity of Generators 135 Kilowatts.

The amount of Fee ...

£ 62 : 5

When applied for,
5th May 1953.

Travelling Expenses (if any) £

When received,

19

Surveyor to Lloyd's Register of Shipping.

FRI. 22 MAY 1953

Committee's Minute

Assigned

See F.E. memo. npl.