

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

18 MAY 1944

Received at London Office.....

Date of writing Report. 22nd APRIL 1944 When handed in at Local Office. 9th 5th 1944 Port of GLASGOW

No. in Survey held at PORT GLASGOW Date, First Survey 14.1.44 Last Survey 27 4 1944
Reg. Book. (Number of Visits.....16)

39952 on the M.V. TREYIDER Tons { Gross 7376
Net 5133

Built at PORT GLASGOW By whom built LITHGOWS LTD Yard No. 986 When built 1944

Owners HAIN S.S. CO LTD Port belonging to LONDON

Electrical Installation fitted by SUNDERLAND FORGE & ENGINEERING CO LTD Contract No. 986 When fitted 1944

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

Have plans been submitted and approved Yes System of Distribution Two wire lead & return Voltage of supply for Lighting 110

Heating — Power 110 Direct or Alternating Current, Lighting D.C. Power D.C. If Alternating Current state periodicity — Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off Yes Are turbine emergency governors fitted with a

trip switch as per Rule — Generators, are they compound wound Yes, are they level compounded under working conditions Yes,

if not compound wound state distance between generators — and from switchboard — Where more than one generator is fitted are they

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 Are the lubricating arrangements and the construction

of the generators as per rule Yes Position of Generators In engine room Port side

—, is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situated

near unprotected combustible material state distance from same horizontally — and vertically —, are the generators protected from mechanical

injury and damage from water, steam and oil Yes, are the bedplates and frames earthed Yes and the prime movers and generators in metallic

contact Yes Switchboards, where are main switchboards placed In engine room near generators

—

are they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam

and oil Yes, if situated near unprotected combustible material state distance from same horizontally — and vertically —, what insulation

material is used for the panels Sindamja, 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 frame effectually earthed Yes

Is the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fuses

to pilot and earth lamps, voltmeters, etc. Yes locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead"

side of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches —

1 - 150 AMPERE D.P. Knife pattern switch with fuses

—

and for each outgoing circuit 60 AMPERE & 30 AMPERE D.P. Change over switches with fuses

—

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 is the ammeter connected on the pole opposite to the

equaliser connection — Earth Testing, state means provided Earth lamps

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled as

per Rule Yes If circuit breakers are provided for the generators, at what overload current did they open when tested —, are the reversed current

protection devices connected on the pole opposite to the equaliser connection —, have they been tested under working conditions, and at what current

did they operate — Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes

Cables, are they insulated and protected as per the appropriate Tables of the Rules Yes, if otherwise than as per Rule are they of an approved type W.E.

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 0.04

square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends Yes



with insulating compound — or waterproof insulating tape 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 cables laid under machines or floorplates —, if so, are they adequately protected —. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit —. State how the cables are supported and protected. MAINS: V.I.P. cables in steel pipe.
MACHINERY SPACE: L.C. cable clipped to steelwork.
ACCOMMODATION: L.C. clipped to woodwork.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes. Refrigerated chambers, are the cables and fittings as per Rule —. 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 and with what material Fibre. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. Emergency Supply, state position — and method of control —. Navigation Lamps, are they separately wired Yes controlled by separate double pole switches Yes 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. Secondary Batteries, are they constructed and fitted as per Rule —, are they adequately ventilated — what is the 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 fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present —, if so, how are they protected — and where are the controlling switches fitted —, are all fittings suitably ventilated Yes, are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of —, whether fixed or portable —, are their fittings as per Rule —. 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 Yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil Yes, if situated near unprotected combustible material state minimum distance from same horizontally — and vertically —. Are motors coupled to oil fuel transfer and unit 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 services been supplied and the results found as per Rule —. 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 —, are all fuses of the cartridge type — are they of an approved type —. 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 —. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule Yes, are they 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	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	15	110	136.5	850	STEAM ENGINE		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	15	1	19/064	136.5	135	50	V.C.	L.C.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
SALOON SECTION BOARD.	1	19/064	50	83	436	W.E.	In steel pipe
ENGINEERS SECTION BOARD.	1	7/064	37.5	46	134	W.E.	In steel pipe

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/064	15	46	486	W.E.	In steel pipe
NAVIGATION LIGHTS	2	1/064	12.6	20	130	W.E.	In steel pipe
LIGHTING AND HEATING							
FORWARD CARGO D.B.	4	1/064	15.6	40	274	W.E.	In steel pipe
CRAWN QUARTERS + FAT CARGO	1	7/064	30	46	258	W.E.	In steel pipe
CRAWN QUARTERS LIGHTING D.B.	1	7/064	16	46	174	W.E.	In steel pipe
SALOON D.B.	1	7/044	22	31	10	W.E.	L.C.
ENGINEERS LIGHTING D.B. PORT	1	7/036	14	24	10	W.E.	L.C.
ENGINEERS LIGHTING D.B. STAR	1	7/036	13	24	80	W.E.	L.C.
ENGINE-ROOM LIGHTING D.B.	1	7/044	15	31	70	W.E.	L.C.
ENGINE-ROOM POWER D.B.	1	7/064	61	75	175	V.C.	L.C.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
DOMESTIC REFRIGERATOR	1	3	4	1/064	27.5	40	416	W.E.	In steel pipe
N°1 OIL PURIFIER	1	2	1	7/036	17.5	24	50	W.E.	L.C.
N°2 OIL PURIFIER	1	2	1	7/036	17.5	24	50	W.E.	L.C.
WORKSHOP MOTOR	1	3	1	7/044	26	31	75	W.E.	L.C.

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.

P.Pro. THE SUNDERLAND FORGE & ENGINEERING CO. LTD.

Electrical Engineers.

Date 4th May 1944.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 30 feet.

Minimum distance between electric generators or motors and steering compass 26 feet.

The nearest cables to the compasses are as follows:—

A cable carrying 12.6 Ampères 9 feet from standard compass 7 feet from steering compass.

A cable carrying 23 Ampères led into ~~feet from~~ standard compass led into ~~feet from~~ steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power Yes

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted Yes

The maximum deviation due to electric currents was found to be nil degrees on any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

LITHGOWS LIMITED

p. J. Grogan

Builder's Signature.

Date

8th May 44

Is this installation a duplicate of a previous case Yes If so, state name of vessel M.V. 'TREYANION'

Plans. Are approved plans forwarded herewith No If not, state date of approval 12/8/43

Certificates. Are certificates of test for motors engaged on essential 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 fitted on board under Special Survey, tested under working conditions and found satisfactory.
 The materials and workmanship are good.

Noted

Fru

22.5.44

Total Capacity of Generators 30 Kilowatts.

The amount of Fee ... £ 22 : 10 : 19

Travelling Expenses (if any) £ 1 : 13/6

When applied for, at 19

When received, 19

M. J. Jardine
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 16 MAY 1944

Assigned Su Gen 22688

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



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