

REPORT ON ELECTRICAL EQUIPMENT

[OTHER THAN FOR THE PROPULSION OF THE VESSEL]

10 FEB 1949

Received at London Office

Date of writing Report 30/12/48. 19 When handed in at Local Office 19 Port of AUCKLAND, N.Z.

No. in Survey held at Auckland. Date: First Survey 14/2/46. Last Survey 20/12/46. 19
Reg. Book (Number of Visits 26.)

76749. on the Steel Single Screw Steam Trawler "TAIAROA". Tons { Gross 252.
Net 88.

Built at AUCKLAND, N.Z. By whom built Mason Bros. Engineering - Yard No. --- When built 1943.
Co. Ltd.

Owners NATIONAL MORTGAGE & AGENCY CO. N.Z. LTD. Port belonging to DUNEDIN, N.Z.

Electrical Installation fitted by Mason Bros Engineering Co. Ltd. Contract No. --- When fitted 1946.

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

Have plans been submitted and approved Yes. This Office System of Distribution two wire Voltage of supply for Lighting 110

Heating 110 Power 110 Direct or Alternating Current, Lighting direct Power direct If Alternating Current, state frequency 50. Prime Movers

has the governing been tested and found efficient when the whole 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 One and from switchboard 2. Feet. Where more than one generator is fitted, are they

arranged to run in parallel ---, 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 Name Plate data. the results found as per rule --- Are the lubricating arrangements and the construction

of the generators as per rule Yes Position of Generators in the Engine Room, well supported attaching to a

Steel Platform. 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 the Engine Room, accessible & well secured and

protected.

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 Synthetic, High Dielectric Strength, of synthetic 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 arrangements of equaliser switches double pole linked

switch with a fuse to each pole, Approved Cartridge Type Fuses.

and for each outgoing circuit double pole linked switches with a fuse to each pole

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

ammeters Two voltmeters Two 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

Are all lead sheaths, armouring and conduits effectually bonded and earthed **Yes**. Refrigerated chambers, are the cables and fittings as per Rule **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** and with what material **Lead Bushings** 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 **No** Secondary Batteries, are they constructed and fitted as per Rule **---**, are they adequately ventilated **---**

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 **No**, 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 **Two**, whether fixed or portable **Fixed**, Beam movable, focussing, are their fittings as per Rule **Yes** 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 **---**

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 **Yes** 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 **---** If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type **---** 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 megger tested and found satisfactory **Yes**

DESCRIPTION OF GENERATOR	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE	
		Kilowatts	Volts	Amperes	Revs. per Min.		Fuel Used	Flash Point of Fuel
MAIN	One.	Fifteen.	110.	136.	550.	Single Cylinder Steam Engine		
						Maker:-Sunderland		
EMERGENCY						Forge.		
ROTARY TRANSFORMER								

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.	2.	37/052.	126.	240.	12'.	Paper and- Rubber and	
" " EQUALISER							Cambric. armoured .	
							Steel Wire.	
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

AUX. SWITCHBOARDS AND SECTION BOARDS									
Forward Accommodation - Lighting.	1.	7/064.	12.	46.	200.	V.I.R.	Lead Alloy	Sheathed	
Midship "	1.	7/029.	13.	15.	150.	"	"	"	"
Navigation Circuits .	1.	7/029.	5.	15.	150.	"	"	"	"
Boiler Room.	1.	7/029.	4'4.	15.	60.	"	"	"	"
Engine "	1.	7/029.	8'6.	15.	30.	"	"	"	"
After Deck .	1.	7/029.	5'4.	15.	60.	"	"	"	"
After Accommodation .	1.	7/029.	6'3.	15.	60.	"	"	"	"

[illegible][illegible]

Rules for ELECTRICAL EQUIPMENT:
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.

Mason Bros.Engineering Co.Ltd. Auckland,N.Z.

Electrical Engineers. Date ---

COMPASSES.

Minimum distance between electric generators or motors and standard compass 45 Feet.

Minimum distance between electric generators or motors and steering compass 43 "

The nearest cables to the compasses are as follows:—

A cable carrying .1 Amperes 5' feet from standard compass 5' feet from steering compass.

A cable carrying .2 Amperes 7' feet from standard compass 1.5 feet from steering compass.

A cable carrying .4 Amperes 4' feet from standard compass 3' 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 --- course in the case of the standard compass, and nil. degrees on --- course in the case of the steering compass.

Mason Bros Engineering Co.Ld.
- Auckland,N.Z.

Builder's Signature.

Date ----

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

NEW INSTALLATION:-

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

Equipment as now installed in this Vessel is to Rule Requirements throughout,the Materials used are of first class quality,the workmanship has been entirely satisfactory,all Fittings and Appliances have been made up under my supervision,Megger Tested and seen in order.The Power is derived from One Sunderland Forge Single Cylinder Vertical Steam Engine No.G563.- direct coupled to a 15.K.W.D.C.Generator as described in the body of the Report and when tested under working conditions was seen to be fit for the work imposed.

I now Recommend that this Electrical Installation be accepted for LLOYD'S MACHINERY CERTIFICATE.

Total Capacity of Generators 15. Kilowatts.

Not yet Charged.

The amount of Fee . . . £ : : When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

A/c for Fees with Certificates.

Committee's Minute

FRI, 18 MAR 1940

Assigned

See minute on file rpt

Richard Paine

Surveyor to Lloyd's Register of Shipping.

100-8/41-J. & O. TRANSFER. (PRINTED IN AUSTRALIA)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



© 2020

Lloyd's Register
Foundation