

Rpt. 13.

No. 10731.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

SEP 19 1938

Date of writing Report 30/8/1938 When handed in at Local Office 1/9/1938

Port of Kobe

No. in Survey held at Osaka

Date, First Survey 27th Sep 1937 Last Survey 22nd June 1938

Reg. Book.

(Number of Visits.....)

on the Steel Screw Lug "TAYGA"

Tons { Gross 355
Net -

Built at Osaka

By whom built Yamana Shipyard Co. Ltd. Yard No. 194 When built 1938

Owners

M. S. S. K.

Port belonging to

Vladivostok

Electric Light Installation fitted by Yamana Shipyard Co. Ltd. Contract No. 194 When fitted 1938

Is the Vessel fitted for carrying Petroleum in bulk

No.

System of Distribution Two conductor insulated

Pressure of supply for Lighting 110 volts, Heating ✓ volts, Power ✓ volts.

Direct or Alternating Current, Lighting Direct Current Power ✓

If alternating current system, state frequency of periods per second ✓

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off

yes.

Generators, do they comply with the requirements regarding temperature rise

yes.

are they over compounded 5 per cent. yes, if not compound wound state distance between each generator

yes

Where more than one generator is fitted are they arranged to run in parallel

✓

series with each shunt field

Have certificates of test results for machines under 100 kw. been submitted and

approved

yes

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing

✓

Are all terminals accessible, clearly marked, and furnished with sockets

yes

short circuited, or touched

yes.

Are the lubricating arrangements of the generators as per Rule

yes.

Position of Generator

Port side aft in engine room

is the ventilation

in way of the generator satisfactory

yes

are they clear of all inflammable material

yes

if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

✓

and

✓

are the generator protected from mechanical injury and damage from water, steam or oil

yes

are their axes of rotation fore and aft

yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed

yes

are the prime movers and their respective generators

in metallic contact

yes

Main Switch Board, where placed

Forward of generator

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard

✓

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes

yes

injury and damage from water, steam or oil

yes

horizontally from or vertically above the switchboards

✓

and

✓

are they constructed wholly of durable, non-ignitable non-absorbent

materials

yes

is all insulation of high dielectric strength and of permanently high insulation resistance

yes

is it of an approved type

yes

if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other

yes

is the non-hygroscopic insulating material of an approved

type

yes

and is the frame effectively earthed

yes

Are the fittings as per Rule regarding:— spacing or shielding of live parts

accessibility of all parts

yes

absence of fuses on back of board

yes

temperature rise of

yes

omnibus bars

yes

individual fuses to voltmeter, pilot or earth lamp

yes

"off" position

No

are all screws and nuts securing connections effectively locked

yes

switches

No

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

Overload circuit-breaker on one pole; double pole knife switches + fuses

Are turbine driven generators fitted with emergency trip switch as per rule

✓

Are cupboards or compartments containing switchboards composed of

fire-resisting material or lined with approved material

✓

Instruments on main switchboard

one

ammeter

one

voltmeter

✓

synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

earth lamps.

Switches, Circuit Breakers and Fusible Cut-outs,

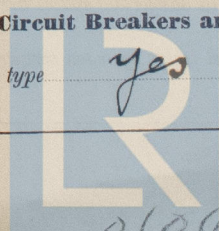
do these comply with the requirements of the Rules

yes

are the fusible cutouts of an approved type

yes

have the reversed



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current protection devices been tested under working conditions ☒ Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule yes

Cables: Single, twin, concentric, or multicore single are the cables insulated and protected as per Tables IV, V, X or XI of the Rules yes

If the cables are insulated otherwise than as per Rule, are they of an approved type ☒ Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 2 volts approx.

Cable Sockets, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets yes

Paper Insulated and Varnished Cambric Insulated Cables, If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound ☒ or waterproof insulating tape ☒ Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage yes Are cables in machinery spaces, galleys, lavatories, bathrooms and lavatories lead covered or run in conduit yes

Support and Protection of Cables, state how the cables are supported and protected Perforated sheet iron plating and hanger clips.

If cables are run in wood casings, are the casings and caps secured by screws ☒ are the cap screws of brass ☒ are the cables run in separate grooves ☒ If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII yes

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements None

Joints in Cables, state if any, and how made, insulated, and protected

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed yes state the material of which the bushes are made lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas ☒

are their connections made as per Rule

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule yes Emergency Supply, state position and method of control of the emergency supply and how the generator is driven None

Navigation Lamps, are these separately wired yes controlled by separate switch and separate fuses yes are the fuses double pole yes are the switches and fuses grouped in a position accessible only to the officers on watch yes

has each navigation lamp an automatic indicator as per Rule yes Secondary Batteries, are they constructed and fitted as per Rule None

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight yes are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected ☒

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected ☒

where are the controlling switches situated ☒

are all fittings suitably ventilated ☒ are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials ☒

Heating and Cooking Appliances, are they constructed and fitted as per Rule ☒ are air heaters constructed and fitted as per Rule ☒

Searchlight Lamps, No. of one whether fixed or portable fixed are their fittings as per Rule yes

Arc Lamps, other than searchlight lamps, No. of ☒ are their live parts insulated from the frame or case ☒ are their fittings as per Rule ☒

Motors, are their working parts readily accessible None are the coils self-contained and readily removable for replacement ☒

are the brushes, brush holders, terminals and lubricating arrangements as per Rule ☒ are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material ☒

are they protected from mechanical injury and damage from water, steam or oil ☒ are their axes of rotation fore and aft ☒ if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type ☒

if not of this type, state distance of the combustible material horizontally or vertically above the motors ☒ and ☒

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing ☒ Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule yes Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings ☒

are all fuses of the filled 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 type approved by the Home Office ☒

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule 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 ...	<u>one</u>	<u>5</u>	<u>110</u>	<u>45.5</u>	<u>500</u>	<u>steam engine</u>	<u>✓</u>	<u>✓</u>		
AUXILIARY ...	<u>✓</u>									
EMERGENCY ...	<u>✓</u>									
ROTARY TRANSFORMER	<u>✓</u>									
GENERATOR, LIGHTING AND HEATING CONDUCTORS.										
DESCRIPTION.	No. of Pole.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.				
MAIN GENERATOR ...	<u>1</u>	<u>22 1/2</u>	<u>4</u>	<u>2 1/4</u>	<u>45.5</u>	<u>54</u>	<u>14</u>	<u>Rubber</u>	<u>lead covered & armoured</u>	
EQUALISER CONNECTIONS	<u>✓</u>									
AUXILIARY GENERATOR...	<u>✓</u>									
EMERGENCY GENERATOR	<u>✓</u>									
ROTARY TRANSFORMER	<u>✓</u>									
ENGINE ROOM...	<u>1</u>	<u>3 1/2</u>	<u>4</u>	<u>0.8 1/4</u>	<u>4.5</u>	<u>21</u>	<u>12</u>	<u>-do-</u>	<u>-do-</u>	
BOILER ROOM.	<u>1</u>	<u>3 1/2</u>	<u>4</u>	<u>0.8 1/4</u>	<u>4.5</u>	<u>21</u>	<u>12</u>	<u>-do-</u>	<u>-do-</u>	
AUXILIARY SWITCHBOARDS	<u>-</u>									
NAVIGATION LIGHTS	<u>1</u>	<u>3 1/2</u>	<u>4</u>	<u>0.8 1/4</u>	<u>3.0</u>	<u>21</u>	<u>140</u>	<u>-do-</u>	<u>-do-</u>	
FORWARD LIGHTS	<u>1</u>	<u>1 1/2</u>	<u>4</u>	<u>1.0 1/4</u>	<u>15.0</u>	<u>24</u>	<u>155</u>	<u>-do-</u>	<u>-do-</u>	
AFT LIGHTS	<u>1</u>	<u>3 1/2</u>	<u>4</u>	<u>0.8 1/4</u>	<u>6.0</u>	<u>21</u>	<u>100</u>	<u>-do-</u>	<u>-do-</u>	
SHORE CONNECTION	<u>1</u>	<u>22 1/2</u>	<u>4</u>	<u>2.0 1/4</u>	<u>✓</u>	<u>54</u>	<u>200</u>	<u>-do-</u>	<u>-do-</u>	
ACCOMMODATION										
ENGINE ROOM	<u>1</u>	<u>1.95 1/2</u>	<u>1</u>	<u>1.6 1/4</u>	<u>3</u>	<u>12.9</u>	<u>120</u>	<u>-do-</u>	<u>-do-</u>	
CABINS	<u>1</u>	<u>1.95 1/2</u>	<u>1</u>	<u>1.6 1/4</u>	<u>3</u>	<u>12.9</u>	<u>150</u>	<u>-do-</u>	<u>LEAD COVERED</u>	
OFFICERS ROOMS	<u>1</u>	<u>1.95 1/2</u>	<u>1</u>	<u>1.6 1/4</u>	<u>4</u>	<u>12.9</u>	<u>200</u>	<u>-do-</u>	<u>-do-</u>	
MORSE LAMP	<u>1</u>	<u>1.95 1/2</u>	<u>1</u>	<u>1.6 1/4</u>	<u>1.0</u>	<u>12.9</u>	<u>240</u>	<u>-do-</u>	<u>-do-</u>	
WIRELESS	<u>1</u>	<u>14.5</u>	<u>4</u>	<u>1.6 1/4</u>	<u>✓</u>	<u>46</u>	<u>180</u>	<u>-do-</u>	<u>-do-ARMORED</u>	
SEARCHLIGHT	<u>1</u>	<u>3 1/2</u>	<u>4</u>	<u>0.8 1/4</u>	<u>5.0</u>	<u>21</u>	<u>210</u>	<u>-do-</u>	<u>-do-DO-</u>	
MASTHEAD LIGHT	<u>1</u>	<u>1.95 1/2</u>	<u>1</u>	<u>1.6 1/4</u>	<u>0.4</u>	<u>12.9</u>	<u>60</u>	<u>-do-</u>	<u>LEAD COVERED</u>	
SIDE LIGHTS	<u>1</u>	<u>1.95 1/2</u>	<u>1</u>	<u>1.6 1/4</u>	<u>0.4</u>	<u>12.9</u>	<u>20</u>	<u>-do-</u>	<u>-do-</u>	
COMPASS LIGHTS	<u>1</u>	<u>1.95 1/2</u>	<u>1</u>	<u>1.6 1/4</u>	<u>16 C.P.</u>	<u>12.9</u>	<u>40</u>	<u>-do-</u>	<u>-do-</u>	
STEER LIGHTS	<u>1</u>	<u>1.95 1/2</u>	<u>1</u>	<u>1.6 1/4</u>	<u>0.4</u>	<u>12.9</u>	<u>220</u>	<u>-do-</u>	<u>-do-</u>	
CARGO LIGHTS	<u>1</u>	<u>1.95 1/2</u>	<u>1</u>	<u>1.6 1/4</u>	<u>2.0</u>	<u>12.9</u>	<u>100</u>	<u>-do-</u>	<u>-do-</u>	
ARC LAMPS	<u>✓</u>									
HEATERS	<u>✓</u>									
MOTOR CONDUCTORS.										
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP ...										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS...										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR...										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP...										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR...										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

NAMURA SHIP-YARD CO.

OSAKA

Electrical Engineers.

Date 29-8-38

COMPASSES.

Distance between electric generators or motors and standard compass

50 feet approx.

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying 3 Amperes 4 feet from standard compass ✓ feet from steering compass.

A cable carrying ✓ Amperes ✓ feet from standard compass ✓ feet from steering compass.

A cable carrying ✓ Amperes ✓ 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 ✓ course in the case of the standard compass, and ✓ degrees on ✓ course in the case of the steering compass.

NAMURA SHIP-YARD Co. Ltd.

Y. Namura

OSAKA

Builder's Signature.

Date 29-8-38

Is this installation a duplicate of a previous case

yes

If so, state name of vessel

POSYET Y "KONGAUS"

General Remarks (State quality of workmanship, opinions as to class, &c.)

The electrical installation of this vessel has been fitted under special survey and in accordance with the approved plans.

The materials and workmanship are good.

Upon completion the installation was tested under full working conditions and found to be satisfactory.

Noted

21/9/38

Total Capacity of Generators 5 Kilowatts.

The amount of Fee ...

Yen 64.28 June 17th 1938

When applied for,

Travelling Expenses (if any) £

:

June 12th 1938

When received.

A. Riddell

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 23 SEP 1938

Assigned

See F. E. Rpt.



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