

# 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 27<sup>th</sup> Sep<sup>r</sup>/37 Last Survey 22<sup>nd</sup> June 1938  
 Reg. Book. on the Steel Screw Lug "TAYGA" (Number of Visits.....)  
 Built at Osaka By whom built Namuru Shipyard Co. Ltd Yard No. 194 When built 1938  
 Owners M. S. S. K. Port belonging to Vladivostok  
 Electric Light Installation fitted by Namuru 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 compound wound 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 , is an adjustable regulating resistance fitted in 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, are they so spaced or shielded that they cannot be accidentally earthed, 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, are they protected from mechanical injury and damage from water, steam or oil yes

if situated near unprotected woodwork or other combustible material, state distance of same 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 non-hygroscopic insulating material, and the slab similarly insulated from its framework 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 yes, accessibility of all parts yes, absence of fuses on back of board yes, temperature rise of omnibus bars yes, individual fuses to voltmeter, pilot or earth lamp yes, are moving parts of switches alive in the "off" position No are all screws and nuts securing connections effectively locked yes are any fuses fitted on the live side of switches No

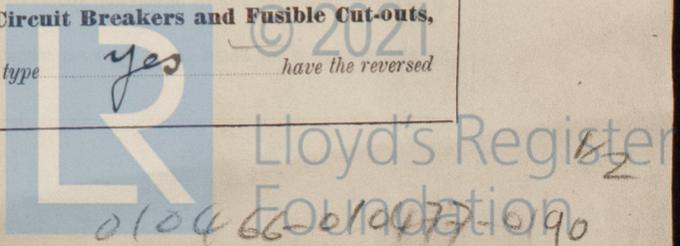
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Overload circuit breaker on one pole; double pole knife switches + fuses

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 ammeters 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



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  **yes** or waterproof insulating tape  **yes** **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  **yes**, are the cap screws of brass  **yes**, are the cables run in

separate grooves  **yes**. 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**  **yes**

are their connections made as per Rule  **yes**

**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  **yes**

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

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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	one	5	110	45.5	500	steam engine	✓	✓
AUXILIARY	✓							
EMERGENCY	✓							
ROTARY TRANSFORMER	✓							

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.			
MAIN GENERATOR	1	22 1/2	4	2 1/4	45.5	54	14	Rubber	lead covered & armoured
EQUALISER CONNECTIONS	✓								
AUXILIARY GENERATOR	✓								
EMERGENCY GENERATOR	✓								
ROTARY TRANSFORMER MOTOR GENERATOR	✓								
ENGINE ROOM	1	3 1/2	4	0.8 1/2	4.5	21	12	-do-	-do-
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
NAVIGATION LIGHTS	1	3 1/2	4	0.8 1/4	3.0	21	140	-do-	-do-
FORWARD LIGHTS	1	11 1/2	4	1.0 1/4	15.0	24	155	-do-	-do-
AFT LIGHTS	1	3 1/2	4	0.8 1/4	6.0	21	100	-do-	-do-
SHORE CONNECTION	1	22 1/2	4	2.0 1/4	✓	54	200	-do-	-do-
ACCOMMODATION									
ENGINE ROOM	1	1.95 1/2	1	1.6 1/4	3	12.9	120	-do-	-do-
CABINS	1	1.95 1/2	1	1.6 1/4	3	12.9	150	-do-	LEAD COVERED
OFFICERS ROOMS	1	1.95 1/2	1	1.6 1/4	4	12.9	200	-do-	-do-
MORSE LAMP	1	1.95 1/2	1	1.6 1/4	1.0	12.9	240	-do-	-do-
WIRELESS	1	14.5	4	1.6 1/4	✓	46	180	-do-	-do- ARMORED
SEARCHLIGHT	1	3 1/2	4	0.8 1/2	5.0	21	210	-do-	-do- -do-
MASTHEAD LIGHT	1	1.95 1/2	1	1.6 1/4	0.4	12.9	60	-do-	LEAD COVERED
SIDE LIGHTS	1	1.95 1/2	1	1.6 1/4	0.4	12.9	20	-do-	-do-
COMPASS LIGHTS	1	1.95 1/2	1	1.6 1/4	16 C.P.	12.9	40	-do-	-do-
STEER LIGHTS	1	1.95 1/2	1	1.6 1/4	0.4	12.9	220	-do-	-do-
CARGO LIGHTS	1	1.95 1/2	1	1.6 1/4	2.0	12.9	100	-do-	-do-
ARC LAMPS	✓								
HEATERS	✓								

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		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.

Y. Namura

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 "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 When applied for, June 17<sup>th</sup> 1938

Travelling Expenses (if any) £ : June 12<sup>th</sup> 1938 When received.

A. Riddell

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 23 SEP 1938

Assigned See F. E. Rpt.

2m 5.24. — Transfer.  
The Surveys are requested not to write on or below the space for Committee's Minute.)



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