

PORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 18 FEB 1931

Report 27th Jan 1931. When handed in at Local Office 28th Jan. 1931. Port of YOKOHAMA.

Survey held at TSURUMI, YOKOHAMA. Date, First Survey 24th Oct. 1930 Last Survey 17th January 1931.
(Number of Visits 15)

On the Steel Screw M.V. "SOYO MARU" Tons { Gross 6081.46
Net 3680.66

By whom built Asano S. B. Co. Ltd Yard No. 270 When built 1931.

TOYO KISEN KABUSHIKI KAISHA Port belonging to YOKOHAMA.

Light Installation fitted by Asano S. B. Co. Ltd. Contract No. 270 When fitted 1931.

el fitted for carrying Petroleum in bulk ho.

Distribution Two wire system.
supply for Lighting 220 volts, Heating 250 volts, Power 250 volts.

Alternating Current, Lighting Direct Power Dist.

Working current system, state frequency of periods per second ✓

Hydraulic Governor been tested and found efficient when the whole load is suddenly thrown on or off yes.

do they comply with the requirements regarding rating yes, are they compound wound yes
compounded 5 per cent. yes, if not compound wound state distance between each generator ✓

than one generator is fitted are they arranged to run in parallel yes, is an adjustable regulating resistance fitted in

shunt field yes

terminals accessible, clearly marked, and furnished with sockets yes, are they so spaced or shielded that they cannot be accidentally earthed,

or touched yes Are the lubricating arrangements of the generators as per Rule yes.

Generators Bottom platform, starboard side of Engine room.

clearance in way of the generators satisfactory yes, are they clear of all inflammable material yes.

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

and ✓, are the generators protected from mechanical injury and damage from water, steam or oil yes.

direction of rotation fore and aft yes.

are the bedplates and frames of the generating plant efficiently earthed yes. are the prime movers and

generators in metallic contact yes.

Switch Boards, where placed 2nd platform, after end of Engine room.

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

an 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

protected from mechanical injury and damage from water, steam or oil yes, if situated near unprotected

other combustible material, state distance of same horizontally from or vertically above the switchboards ✓ and ✓

constructed wholly of durable, non-ignitable non-absorbent materials yes, is all insulation of high dielectric strength and of

high insulation resistance yes, if semi-insulating material is used, are all conducting parts insulated from the slab

micamite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework ✓

are 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, proportion of omnibus

yes, individual fuses to voltmeter, pilot or earth lamp yes, connections of switches yes.

switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches. One double pole, single

switch, with circuit breaker for each generator. For outgoing circuit:— Double pole switches with fuses

equalizer switch fitted with mechanical interlock to circuit breaker.

ammeters 11 voltmeters 6 ✓ synchronising device for paralleling purposes.

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

and fuse for main Bus.

Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules yes

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 Twin are the cables insulated and protected as per Tables IV or V of the Rules yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load Lighting circuit 6 Volt. Power 5 Volts.

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

Paper Insulated Cables. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound 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

Support and Protection of Cables, state how the cables are supported and protected metal 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, if lights are fitted, are the cables and fittings in accordance with the special requirements ✓

Joints in Cables, state if any, and how made, insulated, and protected joints insulated with rubber tape and compound and protected by cast iron joint boxes.

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 rubber insulated .01129 inches.
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 4 K.W. 230 Volt by 450 RPM
D.C. generator driven by hot bulb oil engine, mounted on end deck level, starboard side of engine room.

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. (Chart room)
has each navigation lamp an automatic indicator as per Rule yes.

Secondary Batteries, are they constructed and fitted as per Rule yes

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 by guards.
are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected ✓
how are the cables led ✓
where are the controlling switches situated ✓

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

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 yes, are the coils self-contained and readily removable for replacement yes, are the brushes, brush holders, terminals and lubricating arrangements as per Rule yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material yes, are they protected from mechanical injury and damage from water, steam or oil yes are their axes of rotation fore and aft yes, 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 yes, if not of this type, state distance of the combustible material horizontally or vertically above the motors ✓ and ✓

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 ✓

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 ✓
If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office ✓

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	3	115	230	500	335	Subje. oil engine	Oil fuel	above 150° F.
AUXILIARY ...								
EMERGENCY ...	1	7	230	30.5	450	hot bulb oil engine	"	"
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR ...	1	.4985	61	.103	500	540	150	Paper	Lead covered & Armoured
EQUALISER CONNECTIONS ...	1	.2465	37	.093	300	343	225	"	"
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR ...	1	.0396	19	.052	30.5	64	120	Rubber	"
ROTARY TRANSFORMER MOTOR GENERATOR ...									
ENGINE ROOM Lighting	1	.00701	7	.036	9.0	24	90	"	"
BOILER ROOM ...									
AUXILIARY SWITCHBOARDS 'H'	1	.4064	61	.093	455	464	60	Paper	"
" 'B'	1	.4064	61	.093	455	464	60	"	"
" 'C'	1	.4064	61	.093	455	464	140	"	"
" 'D'	1	.4064	61	.093	455	464	140	"	"
Refrigerating Machine	1	.02214	7	.064	33	46	116	Rubber	Lead covered & Braided
ACCOMMODATION Submains ...	1	.02214	7	.064	33	46	330	"	"
WIRELESS ...	1	.00701	7	.036	16.5	24	350	"	"
SEARCHLIGHT ...									
MASTHEAD LIGHT ...	1	.00152	1	.004	.27	6.1	250	"	"
SIDE LIGHTS ...	1	.00152	1	.004	.27	6.1	30	"	"
COMPASS LIGHTS ...	1	.00152	1	.004	.255	6.1	150	"	Lead Covered
POOP LIGHTS ...	1	.00152	1	.004	.18	6.1	300	"	Lead Covered & Braided
CARGO LIGHTS	1	.02214	7	.064	33	46	300	"	"
Cabin Fans	1	.00701	7	.036	18	24	200	"	"
HEATERS ...	1	.10090	19	.083	23	118	200	"	"

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 Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP ...	1	1	.19640	37	.083	175	184	100	Rubber	Lead covered & Armoured
MAIN BILGE LINE PUMPS ...	1	1	.03960	19	.052	49	64	166	"	"
GENERAL SERVICE PUMP ...	1	1	.07592	19	.072	90	97	90	"	"
EMERGENCY BILGE PUMP										
TURBO BLOWER										
SAWYER PUMP ...	2	2	.24650	37	.093	630	686	475	Paper	"
CIRC. SEA WATER PUMPS ...	2	1	.06000	19	.064	73	83	200	Rubber	"
CIRC. FRESH WATER PUMPS ...	2	1	.03960	19	.052	49	64	240	"	"
AIR COMPRESSOR ...										
FRESH WATER PUMP ...	1	1	.00455	7	.029	10.2	18.2	200	"	"
ENGINE TURNING GEAR ...	1	1	.02214	7	.064	42	46	130	"	"
Submarine oil transfer pump										
ENGINE REVERSE GEAR	1	1	.00455	7	.029	4.3	18.2	60	"	"
LUBRICATING OIL PUMPS ...	2	1	.07592	19	.072	82	97	184	"	"
OIL FUEL TRANSFER PUMP ...	1	1	.07592	19	.072	82	97	50	"	"
WINDLASS ...	1	1	.24650	37	.093	290	295	300	"	Lead covered & Braided
WINCHES, FORWARD ...	2	1	.14780	37	.072	175	191	75	"	"
WINCHES, AFT ...	4	1	.10090	19	.083	140	142	75	"	"
WINCHES, AFT ...	2	1	.14780	37	.072	175	191	200	"	"
WINCHES, AFT ...	4	1	.10090	19	.083	140	142	50	"	"
STEERING GEAR—										
(a) MOTOR GENERATOR ...										
(b) MAIN MOTOR ...	2	2	.06000	19	.064	73	83	500	"	Lead covered & Armoured
WORKSHOP MOTOR ...	1	1	.00455	7	.029	8.2	18.2	180	"	"
VENTILATING FANS ...	2	1	.00701	7	.036	12.3	24	330	"	"

All Conductors are of annealed copper conforming to British Standard Specification No. 7.
 The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
 The foregoing is a correct description.

Yoshio Kamicha Electrical Engineers. Date _____

COMPASSES.

Distance between electric generators or motors and standard compass 24 feet from wireless motor
 Distance between electric generators or motors and steering compass 25 " " " "
 The nearest cables to the compasses are as follows:—
 A cable carrying 2 Amperes 8 feet from standard compass 4 feet from steering compass.
 A cable carrying 1 Amperes 8 feet from standard compass 4 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 with
 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 0 degrees on _____ course in the case of the standard
 compass, and _____ degrees on _____ course in the case of the steering compass.

J. M. Colville Builder's Signature. Date _____

Is this installation a duplicate of a previous case _____ If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c.) The electrical installation of this vessel
has been installed under special survey in accordance with the Rules. Materials
and workmanship good. On completion of installing all generators and installation
tried under full working conditions with satisfactory results. Insulation tests
etc. carried out and found in order.

Elec. Dept
DA 11/431

Total Capacity of Generators 352 Kilowatts.

The amount of Fee ... YEN 403.00 : { When applied for, 23-1-31
 Travelling Expenses (if any) £ : { When received, 30-4-31

J. Micholas
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____
 Assigned _____

TUE. 10 NOV 1931
Elec. Dept

TUE. 17 NOV 1931
FRI. 16 SEP 1932
TUE. 1 MAR 1932
FRI. 28 JUL 1933
TUE. 6 SEP 1932
TUE. 25 APR 1933

Im. 12.98.—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

