

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

1 JUN 1931

Date of writing Report 7th May 1931. When handed in at Local Office 11/5/31 Port of YOKOHAMA

No. in Survey held at YOKOHAMA
Reg. Book.Date, First Survey 27th January Last Survey 4th May 1931
(Number of Visits 14)

on the Steel T. Sc. M.V. "TEIYO MARU"

Tons { Gross 9849.86
Net 5722

Built at Yokohama By whom built Yokohama Dock Co. Ltd. Yard No. 181 When built 1931

Owners NIPPON TANKER KABUSHIKI KAISHA Port belonging to YOKOHAMA

Electric Light Installation fitted by Yokohama Dock Co. Ltd Contract No. 181 When fitted 1931

Is the Vessel fitted for carrying Petroleum in bulk yes.

System of Distribution Two wire insulated system

Pressure of supply for Lighting 100 Volts volts, Heating volts, Power 100 volts.

Direct or Alternating Current, Lighting Direct Power Direct

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 rating yes, are they compound wound yes

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

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

series with each shunt field yes

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 Generators Bottom platform, starboard side of engine room

is the ventilation in way of the generators 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 yes, are the generators 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 Boards, where placed Bottom platform, starboard side of engine room

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, 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

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, proportion of omnibus

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

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

one circuit breaker and two fuses. Outgoing current 14 Double pole, double throw switches

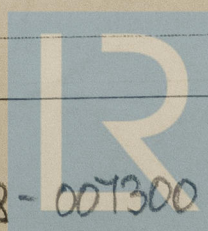
with fuses.

Instruments on main switchboard Two ammeters Two voltmeters synchronising device for paralleling purposes.

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

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule yes



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Cables: Single, twin, concentric, or multicore Single 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 4 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 ✓

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 The cables are enclosed in steel pipes in open spaces along the decks (i.e. weather decks.)

Support and Protection of Cables, state how the cables are supported and protected Metal clips and cables are enclosed in steel pipes along decks

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, 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 Fixed by screws in cast iron joint boxes and insulated by bakelite.

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 ✓

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 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 gas proof casings, 9 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 gas proof casings, how are the cables led through steel tubes, where are the controlling switches situated outside the spaces.

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 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 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 Yes

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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN ...	Two	25	110	227	550	Steam engines.	✓	✓	
AUXILIARY ...									
EMERGENCY ...									
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	.49850	61	.103	227	332	56	Rubber	Lead Covered, Armoured & Braided
EQUALISER CONNECTIONS ...									
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR									
ROTARY MOTOR	1	.00701	4	.036	10	24	20	"	" " "
TRANSFORMER GENERATOR	1	.00701	4	.036	15	24	16	"	" " "
ENGINE ROOM ...	1	.02214	7	.064	33	46	30	"	Lead Covered & Armoured
BOILER ROOM ...									
AUXILIARY SWITCHBOARDS									
ACCOMODATION Engineers	1	.00701	4	.036	16	24	80	"	Lead Covered, Armoured & Braided
" apt	1	.02214	7	.064	18	46	224	"	" " "
" Midship food	1	.06500	19	.064	39	83	480	"	" " "
WIRELESS	1	.02214	4	.064	30	46	570	"	" " "
SEARCHLIGHT	1	.00701	4	.036	10	24	560	"	" " "
MASTHEAD LIGHT	1	.00194	3	.029	.4	7.8	330	"	" " "
SIDE LIGHTS	1	.00194	3	.029	.4	7.8	140	"	" " "
COMPASS LIGHTS	1	.00194	3	.029	.2	7.8	120	"	" " "
POOP LIGHTS	1	.00194	3	.029	.2	7.8	820	"	" " "
CARGO LIGHTS	1	.00194	3	.029	2	7.8	300	"	" " "
ARC LAMPS									
HEATERS									

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	✓									
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	2	1	.19640	34	.083	145	184	260	Rubber	Lead Covered, Armoured & Braided
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	1	1	.00701	4	.036	21	24	160	Rubber	" " "
VENTILATING FANS	1	1	.06000	19	.064	59	83	160	"	" " "
Galley Fans	2	1	.00701	4	.036	8.6	24	160	"	" " "
Full Oil Purifier	1	1	.00701	4	.036	12.1	24	200	"	" " "

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All Conductors are of annealed copper conforming to British Standard Specification No. 7. *Yes*

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

The foregoing is a correct description.

Escher

Electrical Engineers.

Date *Apr 30 1931*

COMPASSES.

Distance between electric generators or motors and standard compass *42 feet*

Distance between electric generators or motors and steering compass *36 feet*

The nearest cables to the compasses are as follows:—

A cable carrying *10* Ampères *12* feet from standard compass *14* feet from steering compass.

A cable carrying *2* Ampères *10* feet from standard compass *12* 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 *No*

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

J. Trushija

Builder's Signature.

Date *30/4/31*

Is this installation a duplicate of a previous case *No* If so, state name of vessel *✓*

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

The Electric appliances and Installation have been fitted onboard under Special Survey in accordance with the Rules. Materials & Workmanship good. After completion of fitting out all tried under full working conditions. Insulation and resistance tests as per the Rules carried out with satisfactory results.

This vessel's machinery & appliances are eligible in my opinion to have the record of AHC S-31 in the Register Book.

*It is submitted that
this vessel is eligible for
the RECORD.*

Elec Light

27 4/4/31

Total Capacity of Generators *50* Kilowatts.

The amount of Fee *YEN 275.00* : *9.5* 19.31

Travelling Expenses (if any) £ *✓* : *7.7* 19.31

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

Committee's Minute *FRI. 10 JUL 1931*

Assigned

Elec Light

Im. 123. —Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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