

Rpt. 13.

No. 23867

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

23 AUG 1935

Date of writing Report 20. 8. 1935 When handed in at Local Office 19 Port of Rotterdam
 No. in Survey held at Rotterdam Date, First Survey 1.7.35 Last Survey 17-8-1935
 Reg. Book. on the M. V. "J. S. Walden" (Number of Visits 12)
 Built at Rotterdam By whom built Rott Drogen Mij Yard No. 189 When built 1935
 Owners The Oriental Tankers Ltd Port belonging to Hongkong
 Electric Light Installation fitted by Nijssen & Co. N.V. Contract No. When fitted 1935
 Is the Vessel fitted for carrying Petroleum in bulk yes

System of Distribution Two wire system

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

Direct or Alternating Current, Lighting direct current Power direct current

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 no, 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 in engine room near main switchboard B.B.

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, 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 engine room B.B.

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 30x5 mm, 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 generator:

change over switch with overload protection, no equalizer switches. Outgoing circuits with lever switches with fuses.

Instruments on main switchboard three ammeters two voltmeters no 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

and kilo-ohm meter

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, twin and multicore* 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 3% power 4%*
 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 *all cables fixed by galvanized iron clips, partly on iron cable plates*
 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 *yes*

Joints in Cables, state if any, and how made, insulated, and protected *no joints are made in main cable joints in cable to lamps are made in watertight junction 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

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 *there are two main generators driven by steam*

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

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 by protected glasses*

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

how are the cables led *in tubes*

where are the controlling switches situated *amidships*

Searchlight Lamps, No. of *one*, whether fixed or portable *portable*, 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 *in general 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 *—*

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 *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	2	30	110	266	375	steam engine	oil	above 150°
AUXILIARY	—	—	—	—	—	—	—	—
EMERGENCY	—	—	—	—	—	—	—	—
ROTARY TRANSFORMER	—	—	—	—	—	—	—	—

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	No. of Poles.	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	2	2x0.19640	37	0.072	266	365	75 - 80	rubber	lead covered and armoured	
EQUALISER CONNECTIONS	—	—	—	—	—	—	—	—	—	
AUXILIARY GENERATOR	—	—	—	—	—	—	—	—	—	
EMERGENCY GENERATOR	—	—	—	—	—	—	—	—	—	
ROTARY TRANSFORMER	—	—	—	—	—	—	—	—	—	
ENGINE ROOM	1	0.00322	1	0.064	24	120	120	120	—	
BOILER ROOM	1	0.00322	1	0.064	24	120	120	120	—	
AUXILIARY SWITCHBOARDS	1	1x0.19640	37	0.072	100	104	550	—	—	
Box Boiler room	1	0.10090	19	0.03	100	110	300	—	—	
Box Workshop	1	0.07592	19	0.072	60	97	330	—	—	
Box Refrigerators	1	0.02214	7	0.064	40	46	250	—	—	
ACCOMMODATION	1	0.07592	19	0.072	53	97	300	—	—	
upper bridge	1	0.00701	7	0.036	5	24	70	—	—	
fore castle	1	0.00701	7	0.036	6	24	330	—	—	
navigation	1	0.00701	7	0.036	5	24	620	—	—	
WIRELESS	1	0.01462	7	0.052	30	37	100	—	—	
SEARCHLIGHT	1	0.00701	7	0.036	10	24	120	—	—	
MASTHEAD LIGHTS	1	0.00455	7	0.029	0.6	10.2	240	—	—	
SIDE LIGHTS	1	0.00322	1	0.064	0.6	12.9	60	—	—	
COMPASS LIGHTS	1	0.00322	1	0.064	0.25	12.9	50	—	—	
POOP LIGHTS	1	0.00455	7	0.029	0.6	10.2	700	—	—	
CARGO LIGHTS	1	0.00455	7	0.029	3	10.2	225	—	—	
ARC LAMPS	—	—	—	—	—	—	—	—	—	
HEATERS	1	0.01462	7	0.052	20	37	70	—	—	

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	1	1	0.00455	7	0.029	4	10.2	60	rubber	lead covered and armoured
ENGINE TURNING GEAR	1	1	0.06000	19	0.064	75	03	80	—	—
ENGINE REVERSING GEAR	—	—	—	—	—	—	—	—	—	
LUBRICATING OIL PUMPS	—	—	—	—	—	—	—	—	—	
OIL FUEL TRANSFER PUMP	4	1	0.00455	7	0.029	0	10.2	55/55/55/55	—	—
WINDLASS	—	—	—	—	—	—	—	—	—	
WINCHES, FORWARD	—	—	—	—	—	—	—	—	—	
oil separator	1	1	0.00455	7	0.029	12	10.2	130	—	—
WINCHES, AFT	—	—	—	—	—	—	—	—	—	
Refrigerator motor	1	1	0.02214	7	0.064	30	46	100	—	—
STEERING GEAR	—	—	—	—	—	—	—	—	—	
(a) MOTOR GENERATOR	—	—	—	—	—	—	—	—	—	
(b) MAIN MOTOR	1	1	0.01046	7	0.044	25	31	220	—	—
WORKSHOP MOTOR	3	1	0.00455	7	0.029	16	10.2	65/65/65	—	—
VENTILATING FANS	2	1	0.03960	19	0.052	58	64	80/90	—	—
Workshop motor	1	1	0.00701	7	0.036	24	24	65	—	—
"	1	1	0.02214	7	0.064	40	46	70	—	—
converter Russ. Ind.	1	1	0.00455	7	0.029	6	10.2	280	—	—
range	1	1	0.07592	19	0.072	01	97	330	—	—
sawing mach.	1	1	0.00701	7	0.036	12	24	100	—	—
water boiler	1	1	0.00701	7	0.036	10	24	80	—	—
"	1	1	0.00455	7	0.029	14	10.2	80	—	—
gyro compass	1	1	0.01462	7	0.052	30	37	90	—	—

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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.

M. J. Mijnsen
M. J. MIJNSSEN & Co. N.V.

Electrical Engineers.

Date 15 Aug 1935

COMPASSES.

Distance between electric generators or motors and standard compass 60 feet

Distance between electric generators or motors and steering compass 54 feet

The nearest cables to the compasses are as follows:—

A cable carrying 0.25 Ampères 1 feet from standard compass 1 feet from steering compass.

A cable carrying 5 Ampères 25 feet from standard compass 20 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 yes

The maximum deviation due to electric currents was found to be 0 degrees on every course in the case of the standard compass, and 0 degrees on every course in the case of the steering compass.

ROTTERDAMSCHЕ DROUWOK MAATSCHAPPIJ

Director

P. C. Mijnsen

Builder's Signature.

Date

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. This installation has

been fitted in according to the Society's Rules, approved plan and Secretary's letters, material tested as required and workmanship good. The whole was found in a good working condition when tried and I am of opinion that same merits the approval of the Committee.

Noted

L.H.

30/8/35

Total Capacity of Generators 60 Kilowatts.

The amount of Fee ...

£ 342.00

When applied for,

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Travelling Expenses (if any) £

When received,

9-9-35

J. J. Oeteno
Secretary to Lloyd's Register of Shipping.

Committee's Minute

FRI. 13 SEP 1935

FRI. 17 APR 1936

TUE. 7 JUL 1936

FRI. 27 NOV 1936

Assigned

See Rob. J.E. 25867