

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

21 DEC 1930

Date of writing Report 12. 12. 1930 When handed in at Local Office

Port of Rotterdam

To. in Survey held at Rotterdam Date, First Survey 5-6-30 Last Survey 11-12-1930
Reg. Book. (Number of Visits 18)

on the Steel Screw motor vessel **TARAKAN**

Tons { Gross 8183
Net 4987

Built at 1930 By whom built Mij. Tjensgaard Yard No. 318 When built 1930

Owners Hoozem. Mij. Nederland Ad. dam Port belonging to Amsterdam

Electric Light Installation fitted by R. & C. M. H. G. Brown & Co. Contract No. When fitted 1930

Is the Vessel fitted for carrying Petroleum in bulk no

System of Distribution direct and alternating current

Pressure of supply for Lighting 220 and 20 volts, Heating 220 volts, Power 220 volts.

Direct or Alternating Current, Lighting direct and alternating Power direct current; small fans alternating current

If alternating current system, state frequency of periods per second 50

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, 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 in 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, 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 in 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

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 no, proportion of omnibus

bars 1600 mm², individual fuses to voltmeter, pilot or earth lamp yes, connections of switches

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

a double pole switch and a single pole automatic switch with trips

each outgoing circuit a double pole switch with fuses or automatic switch with trip

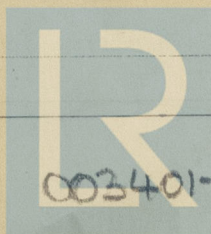
Instruments on main switchboard 18 ammeters 4 voltmeters synchronising device for paralleling purposes.

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

and Ohm meters

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, concentric* 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 *3 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 *not used*

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 *with clips in iron casings or in wooden casings*

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 *only for stores*

Joints in Cables, state if any, and how made, insulated, and protected *in watertight 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 *all armoured* state the material of which the bushes are made

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *no heaters 6 m²*

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 *not provided*

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 *no*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *no*

how are the cables led

where are the controlling switches situated

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 *one*, are their live parts insulated from the frame or case *yes*, are their fittings as per Rule *yes*

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 *yes* and *yes*

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.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN ...	4	180	220	820	525	Diesel-engine	Diesel oil		
AUXILIARY ...									
EMERGENCY ...									
ROTARY TRANSFORMER	2	30KVA	110	157	1500	Direct current generator			
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 Effective Area per Pole Sq. Ins.	No.	Area per Strand Sq. Ins.	In Circuit.	Return.			
MAIN GENERATOR ...	4	4x150	37	4.05	800	800	90	rubber	steel wires
EQUALISER CONNECTIONS	2	2x150	37	4.05				"	"
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR									
ROTARY MOTOR	1	1x70	19	3.69	120	120	120	"	"
TRANSFORMER									
ENGINE ROOM ...	1	2x185	37	5.00	440	440	180	"	"
BOILER ROOM ...									
AUXILIARY SWITCHBOARDS	2	2x185	37	5.00	440	440	420	"	"
	2	2x185	37	5.00	440	440	380	"	"
	2	2x170	37	4.05	400	392	450	"	"
ACCOMMODATION	1	1x6			14		400	"	"
	1	1x10			14		320	"	"
	1	1x6			9		180	"	"
WIRELESS	1	1x16	7	2.3		50	280	"	"
SEARCHLIGHT	1	1x25	7	3.57	80	60	150	"	"
MASTHEAD LIGHT	1	1x1 1/2	1	1.5	0.25	9	400	"	"
SIDE LIGHTS	1	1x1 1/2	1	1.5	0.25	9	210	"	"
COMPASS LIGHTS	1	1x1 1/2	1	1.5	0.25	9	40	"	"
POOP LIGHTS	1	1x1 1/2	1	1.5	0.25	9	460	"	"
CARGO LIGHTS	1	1x1 1/2	1	1.5	2	9	120	"	"
ARC LAMPS	1	1x50	19	3.69	95	95		"	"
HEATERS	1	1x70	19	3.69	100	120		"	"
	1	1x35	19	1.85	80	80		"	"
MOTOR CONDUCTORS.									
DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
	No. of Motors.	No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Return.		
BALLAST PUMP	1	1	1x70	19	3.69	100	120	180	rubber steel wires
MAIN BILGE LINE PUMPS	1	1	1x25	7	3.57	80	60	160	"
GENERAL SERVICE PUMP									
EMERGENCY BILGE PUMP	1	1	1x15	7	3.57	60	60	60	"
SANITARY PUMP	1	1	1x70	19	3.69	100	120	120	"
CIRC. SEA WATER PUMPS	2	2	2x95	19	5.00	300	300	80	"
CIRC. FRESH WATER PUMPS									
AIR COMPRESSOR	2	2	2x185	37	5.00	420	440	110	"
FRESH WATER PUMP	2	1	1x1 1/2	7	0.90	12	14	90	"
ENGINE TURNING GEAR	1	1	1x50	19	3.69	88	95	180	"
ENGINE TURNING GEAR	1	1	1x2 1/2	1	2.5	8	16	80	"
LUBRICATING OIL PUMPS	2	1	1x25	7	3.57	60	60	80	"
OIL FUEL TRANSFER PUMP	2	1	1x70	19	3.69	120	120	96	"
WINDLASS	1	2	2x95	19	5.00	300	300	300	"
WINCHES, FORWARD	5	1	1x70	19	3.69	122	120	280	"
WINCHES, AFT	4	1	1x70	19	3.69	122	120	280	"
CRANES	6	1	1x95	19	5.00	144	150	260	"
STEERING GEAR									
(a) MOTOR GENERATOR	2	1	1x35	19	1.85	80	80	420	"
(b) MAIN MOTOR	1	1	1x2 1/2	1	2.5	8	16	120	"
WORKSHOP MOTOR	1	1	1x1 1/2	1	1.5	9	9	200	"
VENTILATING FANS	43	1	1x1 1/2	1	1.5	9	9	200	"
Boiler fan	1	1	1x4	7	0.90	17	14	80	"
Feed pump donkey	2	1	1x10	7	1.50	31	24	80	"
Oil separator	5	1	1x4	7	0.90	18	24	120	"
Oil fuel pump	2	1	1x2 1/2	1	2.5	7	16	60	"
Refrigerating engine	1	1	1x16	7	2.3	50	50	90	"
Brine pump	1	1	1x2 1/2	1	2.5	7	16	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.

p.p. N.V. Rotterdamsche Electriciteits Mij.

V.H.H. GROON & CO.

Electrical Engineers.

Date 12-12-1930

COMPASSES.

Distance between electric generators or motors and standard compass 180

Distance between electric generators or motors and steering compass 170

The nearest cables to the compasses are as follows:—

A cable carrying 60 Amperes 60 feet from standard compass 55 feet from steering compass.

A cable carrying 10 Amperes 40 feet from standard compass 36 feet from steering compass.

A cable carrying 5 Amperes 30 feet from standard compass 30 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 even course in the case of the standard

compass, and 0 degrees on even course in the case of the steering compass.

Maatschappij voor Scheeps- en Werktuigbouw

DEIJENoord N.V.

Builder's Signature.

Date 14-12-30

Is this installation a duplicate of a previous case No If so, state name of vessel 2

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

been fitted in accordance with the Society's Rules, approved plan and Secretary's letters, material and workmanship found good.

The whole was found in a good working order when tried and I am of opinion that this vessel's electric lighting and power installation merits the Committee's approval

Elec. Light

6/1/31

Total Capacity of Generators 720 Kilowatts.

The amount of Fee ... £ 558.00

When applied for,

10/12/30

Travelling Expenses (if any) £

When received,

3/2/31

Committee's Minute

FRI 16 JAN 1931

Assigned

Elec. Lt.



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