

-1 DEC 1930

1930

No. 12112

Rpt. 13.

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 26 Nov 1930 When handed in at Local Office

Port of AMSTERDAM.

No. in Survey held at AMSTERDAM.

Date, First Survey 4 July Last Survey 8 Nov 1930

(Number of Visits 2)

Reg. Book.

on the Single Screw Motor vessel "TABIAN"

Tons { Gross 8150.63  
Net 4894.69

Built at AMSTERDAM By whom built Nederlandsche Scheeps- Yard No. 203

When built 1930

Owners Stoomvaart Maatschappij Nederland

bouw My

Port belonging to

AMSTERDAM.

Electric Light Installation fitted by Groeneveld, van der Poll & Co

Contract No.

When fitted 1930

Is the Vessel fitted for carrying Petroleum in bulk no

System of Distribution

Two, one

Pressure of supply for Lighting

220

volls, Heating

220

volls, Power

220

volls.

Direct or Alternating Current, Lighting

Direct current

Power

Direct & alternating

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

Two at 15 & 30 ft in Motor 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 yes

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

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards none and

are they constructed wholly of durable, non-ignitable non-absorbent materials yes

permanently high insulation resistance yes

with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework none

and is the frame effectively earthed yes

Are the fittings as per Rule regarding:— spacing or shielding of live 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

handle switch for negative pole & equaliser

Instruments on main switchboard 10 ammeters 2 voltmeters

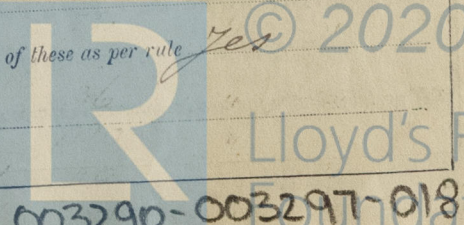
synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system 2 ohmmeters

and 4 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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0184 2/2



Cables: Single, twin, concentric, ~~or~~ 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 *lightning 3% power 5%*

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 *none*

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 *The armoured cables are supported with galvanised iron clips and lead covered with brass clips & screws.*

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 *none made*

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 *Emergency lighting on battery, placed in steering 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*

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 *fixed*, are their fittings as per Rule *Yes*

Are 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 *—*

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 *—*

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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	2	180	220	210	300	Diesel Engine	heavy oil	above 150° F.
AUXILIARY ...	—	—	—	—	—	—	—	—
EMERGENCY ...	—	—	—	—	—	—	—	—
ROTARY TRANSFORMER	2	30 KVA	110	120	1500	Electric motor	—	—

## GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	No. per Pole.	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	1	0.60620	91	0.093	750	760	120	rubber	lead covered & armoured
EQUALISER CONNECTIONS	1	1	0.60620	91	0.093	205	304	120	—	—
AUXILIARY GENERATOR ...	—	—	—	—	—	—	—	—	—	—
EMERGENCY GENERATOR ...	—	—	—	—	—	—	—	—	—	—
ROTARY TRANSFORMER MOTOR	1	1	0.11680	37	0.064	120	130	60	—	—
ENGINE ROOM ...	1	1	0.03960	19	0.032	46	64	90	—	—
BOILER ROOM ...	—	—	—	—	—	—	—	—	—	—
AUXILIARY SWITCHBOARDS	—	—	—	—	—	—	—	—	—	—
Heating B.	1	1	0.07592	19	0.072	95	97	210	—	—
C	1	1	0.07592	19	0.072	45	97	140	—	—
E	1	1	0.06000	19	0.064	01	83	390	—	—
General service	1	1	0.07592	19	0.072	90	97	150	—	—
Navigation	1	1	0.06000	19	0.064	5	83	60	—	—
ACCOMMODATION	—	—	—	—	—	—	—	—	—	—
B	1	1	0.06000	19	0.064	13	83	210	—	—
C	1	1	0.06000	19	0.064	5	83	140	—	—
D	1	1	0.00701	7	0.086	0	24	20	—	—
E	1	1	0.01046	7	0.044	10	24	490	—	—
WIRELESS ...	1	1	0.02214	7	0.064	21	46	150	—	—
SEARCHLIGHT ...	1	1	0.03960	19	0.052	60	64	120	—	—
MASTHEAD LIGHT ...	1	1	0.00322	1	0.064	1	12.9	240	—	—
SIDE LIGHTS ...	1	1	0.00322	1	0.064	1	12.9	25	—	—
COMPASS LIGHTS ...	1	1	0.00322	1	0.064	1	12.9	15	—	—
POOP LIGHTS ...	1	1	0.00322	1	0.064	1	12.9	16	—	—
CARGO LIGHTS ...	1	1	0.00322	1	0.064	10	12.9	16	—	—
ARC LAMPS ...	—	—	—	—	—	—	—	—	—	—
HEATERS ...	1	1	0.00455	7	0.029	15	102	32	—	—

## 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	0.07452	19	0.072	90	97	90	rubber	lead covered & armoured
MAIN BILGE LINE PUMPS ...	2	1	0.06000	19	0.064	54	83	54	—	—
GENERAL SERVICE PUMP ...	—	—	—	—	—	—	—	—	—	—
EMERGENCY BILGE PUMP ...	—	—	—	—	—	—	—	—	—	—
SANITARY PUMP ...	1	1	0.07592	19	0.072	90	97	90	—	—
CIRC. SEA-WATER PUMPS ...	2	2	0.19640	37	0.083	300	360	90	—	—
CIRC. FRESH WATER PUMPS ...	2	1	0.00455	7	0.029	13	102	34	—	—
AIR COMPRESSOR ...	2	2	0.40640	61	0.093	500	576	140	—	—
FRESH WATER PUMP ...	2	1	0.01462	7	0.052	31	37	10	—	—
ENGINE TURNING GEAR ...	1	1	0.03960	19	0.052	50	64	100	—	—
ENGINE REVERSING GEAR ...	—	—	—	—	—	—	—	—	—	—
LUBRICATING OIL PUMPS ...	2	1	0.01680	37	0.064	90	130	120	—	—
OIL FUEL TRANSFER PUMP ...	1	1	0.10090	19	0.083	110	110	210	—	—
WINDLASS ...	1	1	0.60620	91	0.093	360	384	120	—	—
WINCHES, FORWARD ...	5	1	0.07592	19	0.072	90	97	120	—	—
WINCHES, AFT ...	4	1	0.07592	19	0.072	90	97	120	—	—
STEERING GEAR—	—	—	—	—	—	—	—	—	—	—
(a) MOTOR GENERATOR ...	—	—	—	—	—	—	—	—	—	—
(b) MAIN MOTOR ...	2	1	0.06000	19	0.064	75	83	370	—	—
WORKSHOP MOTOR ...	1	1	0.0701	7	0.036	17	24	72	—	—
VENTILATING FANS ...	—	—	—	—	—	—	—	—	—	—
Bolton fans	1	1	0.00415	7	0.029	17	102	36	—	—
Cabstand	2	1	0.19640	37	0.083	170	104	100	—	—
Oil separator	5	1	0.00701	7	0.086	20	24	60	—	—
Bolton fuel pump	2	1	0.01462	7	0.052	25	37	60	—	—
Refrigerating pump	1	1	0.03960	19	0.052	42	64	54	—	—
Bilge pump	1	1	0.00455	7	0.029	7	102	54	—	—



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.

ORONEVELD, VAN DER POLL & Co's

Electrical Engineers.

Date

### COMPASSES.

Distance between electric generators or motors and standard compass  $\pm 63$  feet

Distance between electric generators or motors and steering compass  $\pm 52$  feet

The nearest cables to the compasses are as follows:—

A cable carrying 0.15 Ampères  $\pm 3$  feet from standard compass 3 feet from steering compass.

A cable carrying 0.50 Ampères  $\pm 6$  feet from standard compass 18 feet from steering compass.

A cable carrying 0.15 Ampères  $\pm 4$  feet from standard compass  $\pm 16$  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.

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.

N.V. NEDERLANDSCHE SCHEEPSBOUW-MAATSCHAPPIJ

Builder's Signature.

Date 28 NOV. 1930

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 Insulation has been built in accordance with the rules. workmanship throughout good. Tested under full working condition found working satisfactorily.*

It is submitted that  
this vessel is eligible for  
THE RECORD.

*Elec. Light*

*2/12/30*

Total Capacity of Generators ~~720~~ <sup>540</sup> Kilowatts.

The amount of Fee ... *£ 594* :

When applied for,

19.

Travelling Expenses (if any) £ :

When received,

10.12.30

*Burgdorff*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 9 DEC 1930

Assigned



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Lloyd's Register  
Foundation