

Rpt. 18.

No. 4285c.

# REPORT ON ELECTRIC FITTINGS,

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 15th Nov. 1940, When handed in at Local Office Port of Sourabaya, Java.

No. in Survey held at Sourabaya Drydock Coy Date, First Survey 7th March Last Survey 17th Sept. 1940.  
Reg. Book. (Number of Visits 8)

on the steel single screw steamer "BORSUMY" Tons { Gross 215.53  
Net

Built at Sourabaya By whom built N.V. Droogdok Mij. "Soerabaia" Yard No. 251. When built 1940.

Owners N.V. Borneo Sumatra Handel Maatschappij Port belonging to Bandjermasin.

Electric Light Installation fitted by N.V. Droogdok Mij. "Soerabaia" Contract No. 251 When fitted 1940.

System of Distribution Main - and sub division - two wire system

Pressure of supply for Lighting 32 volts, Heating - volts, Power - volts.

Direct or Alternating Current, Lighting Direct current Power -

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 overload with fuses, are they compound wound shunt wound *batteries fitted*

are they over compounded 5 per cent. no, if not compound wound state distance between each generator one generator

Where more than one generator is fitted are they arranged to run in parallel - is an adjustable regulating resistance fitted in series with each shunt field -

Are all terminals accessible and clearly marked Yes, are they so spaced or shielded that they cannot be accidentally earthed,

or short circuited Yes Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators Longitudinal axis Port

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 no woodwork and - are the generators protected from mechanical injury and damage from water, steam or oil Yes

are their axis of rotation fore and aft

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

If the generators and main switchboard are not placed in the same compartment, is each generator provided with fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard in the same room

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 no woodwork and

are they constructed wholly of durable, incombustible 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 connected to one pole insulated from the slab with mica or micanite and the slab similarly insulated from its framework - and is the

one effectively earthed Yes Are the following fittings as per Rule, viz.: - spacing or shielding of live parts

Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, proportion of omnibus

no omnibusbar, individual fuses to voltmeter, pilot or earth lamp not individual, connections of switches Yes

in Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches double - poles

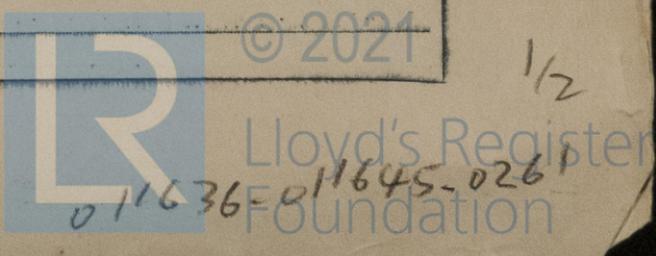
in switchgear.

instruments on main switchboard one ammeters one voltmeters - synchronising device for paralleling purposes.

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

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

Control and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes



and twin ✓  
 insulation of cables, state type of cables, single or twin single are the cables insulated and protected as per Tables III or IV of the Rules.

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load -

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 square inch and above provided with soldering sockets  
 Cables of 0.0023 sq. in. are bent and of 0.0038-0.0061 and 0.038 sq. inch are provided with soldering sockets.

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

Support and Protection of Cables, state how the cables are supported and protected along cable-way and secured by 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 no. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VI 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. Turned together and screwed with joint-socket.

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 Positions, 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. Earth - lamps earthed with cables of 2.5 mm<sup>2</sup> sectional area.  
 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. Control by fuses and chain driven by propeller shaft. Batteries as per plan

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, are separate screens provided for the use of oil and electric side lights Yes, are separate oil lanterns provided for the mast head lights and side lights Yes

Fittings, are all fittings on weather decks, in storerooms 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 stowed 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 - , are their live parts insulated from the frame or case - , are their fittings as per Rule -

Motors, are their working parts readily accessible - , are the coils self-contained and readily removable for replacement - , are the brushes, brush holders, terminals and lubricating arrangements as per Rule - , are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material - , are they protected from mechanical injury and damage from water, steam or oil - are their axis of rotation fore and aft - , 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 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, sections 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	One	2	32/47	42.5	1000	Chain driven by propeller shaft.			
AUXILIARY									
EMERGENCY						Chain defective (recovered) + steam source fitted		441	
ROTARY TRANSFORMER									

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return) Feet.	Installed with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	0,038	7	0,085	42.5	45	Lead covered in cable-way.	
	AUXILIARY GENERATOR							and armoured cable.	
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM								
	WIRELESS								
	SEARCHLIGHT	2	0,0038	7	0,0266	3.1	30	Lead covered in cable-way	
	MASTHEAD LIGHT	2	0,0038	7	0,0260	0.78	180	and armoured cable.	
	SIDE LIGHTS	4	0,0023	1	0,0545	1.56	10		
	COMPASS LIGHTS	2	0,0023	1	0,0545	0.78	10		
	POOP LIGHTS								
	CARGO LIGHTS								
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return) Feet.	Installed with	HOW PROTECTED.
				No.	Diameter.				
	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								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	WORKSHOP MOTOR								
	VENTILATING FANS	5	0,0038	7	0,0266	3.9	140	Lead covered and armoured cable	in cable-way.

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.

Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass C.A. 20 feet

Distance between electric generators or motors and steering compass C.A. 54 feet

The nearest cables to the compasses are as follows:—

A cable carrying 3/4 Amperes C.A. 4 feet from standard compass C.A. 4 feet from steering compass.

A cable carrying 3/4 Amperes C.A. 4 feet from standard compass C.A. 4 feet from steering compass.

A cable carrying 3 Amperes C.A. 5 feet from standard compass C.A. 5 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 no degrees on course in the case of the standard compass, and no degrees on course in the case of the steering compass.

N.V. Dierckx Maatschappij, S.H.K.

*[Signature]*

Builder's Signature.

Date 15th Nov. 1940.

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, etc.)

The installation fully complied with the Society's Rules and Society's letters and approved plans, and has been tried under working condition. Workmanship good and is in my opinion eligible to be classed +100A1.

The 16 Cells 32V 250 Ah lead accumulator has been installed in airtight steel box with air outlet to deck.

*Noted*  
*J.Y.*  
*18/2/41*

Total Capacity of Generators 2 Kilowatts

The amount of Fee ...	£. 120,00	} When applied for.	23/10/40.
Airmail postages.F.	15,00.		
Travelling Expenses (if any)£.	5,00.	} When received.	23/10/40.

*[Signature]*  
 Surveyor to Lloyd's Register of Shipping.

TUE. 4 MAR 1941

Committee's Minute

Assigned

See Sha. JEA285



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