

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

-5 OCT 1936

Date of writing Report

2nd Oct. 1936 When handed in at Local Office

3rd Oct. 1936 Port of Mahor

No. in Survey held at

Mahor

Date, First Survey

22nd Aug.

Last Survey

30th Sept. 1936

Reg. Book No.

87468 on the

Single Screw Motor Tanker "BRALANTA"

Tons

Gross 9608

Net 5759

Built at

Mahor

By whom built

Hockmms M. V. 2703

Yard No. 191

When built 1936

Owners

MS Bralanta

Port belonging to

Ocho

Electric Light Installation fitted by

Hockmms M. V. 2703

Contract No.

When fitted 1936

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

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 temperature rise

Yes

are they over compounded 5 per cent.

Yes

Where more than one generator is fitted are they arranged to run in parallel

Yes

series with each shunt field

Yes

approved

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing

Yes

Are all terminals accessible, clearly marked, and furnished with sockets

Yes

short circuited, or touched

Yes

Position of Generators

One main generator on each side at fore end of motor room

One steam generator on 2nd deck, port side of motor room

in way of the generators satisfactory

Yes

woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

are the generators protected from mechanical injury and damage from water, steam or oil

Yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed

Yes

in metallic contact

Yes

Main Switch Boards, where placed

At fore end of motor space (centre)

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

injury and damage from water, steam or oil

Yes

horizontally from or vertically above the switchboards

Yes

materials

Main steel

is it of an approved type

Yes

non-hygroscopic insulating material, and the slab similarly insulated from its framework

no conducting parts pass through the slab

type

Yes

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

Yes

accessibility of all parts

Yes

omnibus bars

Yes

"off" position

No

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

Generators:— A double pole circuit breaker with overload & reverse current trips & a single pole equalizer switch

Circuits:— A double pole linked switch and a fuse on each pole

Are turbine driven generators fitted with emergency trip switch as per rule

Yes

fire-resisting material or lined with approved material

Yes

voltmeters

Yes

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

Ohm meters

do these comply with the requirements of the Rules

Yes

are the fusible cutouts of an approved type

Yes

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current protection devices been tested under working conditions *Yes* Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule *Yes* Cables: Single, twin, concentric, or multicore *Single* are the cables insulated and protected as per Tables IV, V, X, XI of the Rules *Yes* If the cables are insulated otherwise than as per Rule, are they of an approved type *Galv steel tape arm* Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *Less than allowed in Sec 4* Cable Sockets, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets *Yes* Paper Insulated and Varnished Cambric Insulated Cables, If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound *✓*, or waterproof insulating tape *✓* 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 *Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit* *Lead covered & armoured* Support and Protection of Cables, state how the cables are supported and protected *Supported by metal clips and where necessary protected by steel sheet* *✓* 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, 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 in main or power cables. Branch, metal joint 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 *✓* 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 *✓* are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *Lamps contained in gastight fittings* *✓* *For gastight fitting* *✓* where are the controlling switches situated *Outside the space* *✓* are all fittings suitably ventilated *Yes* are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials *Yes* Heating and Cooking Appliances, are they constructed and fitted as per Rule *Yes* are air heaters constructed and fitted as per Rule *✓* Searchlight Lamps, No. of *✓* whether fixed or portable *✓* are their fittings as per Rule *✓* 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* as a rule *✓* 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 *✓* have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing *✓* 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 *✓* 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* are all fuses of the filled cartridge type *Yes* are they of an approved type *Yes* If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office *✓* Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule *Yes* and motors with shafts in addition *✓*

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	2-120	115	2-1045	350	Heavy oil engines.	Heavy Oil	Above 150° F.	
AUXILIARY	1	25	110	227	600	Steam engine.			
EMERGENCY									
ROTARY TRANSFORMER									

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.
		Total Nominal Area per Pole Sq. mm.	No.	Diameter.	Circuit.	Rule.				
MAIN GENERATOR ...	4	240	61	2.24	1050	1100	Max 17	Rubber	Lead covered and arm. with galv. steel tap.	
EQUALISER CONNECTIONS		2-240	61	2.24						
AUXILIARY GENERATOR...	1	185	37	2.52	227	240	46			
EMERGENCY GENERATOR										
ROTARY TRANSFORMER										
ENGINE ROOM...	1	16	7	1.71	40	50	16			
BOILER ROOM...	1	16	7	1.71	40	50	16			
AUXILIARY SWITCHBOARDS	A	50	19	1.83	70	100	172			
"	B	16	7	1.71	30	50	65			
"	C	16	7	1.71	30	50	72			
"	D	6	7	1.05	10	30	200			
"	E	6	7	1.05	15	30	90			
ACCOMMODATION ...	1	15	7	0.52	max. 4	8	max. 25			
WIRELESS ...	1	50	19	1.83	-	-	167			
SEARCHLIGHT ...	1	25	7	2.53	40	75	253			
MASTHEAD LIGHT ...	1	15	7	0.52	0.6	8	max. 120			
SIDE LIGHTS ...	1	15	7	0.52	0.6	8	30			
COMPASS LIGHTS ...	1	15	7	0.52	0.6	8	20			
POOP LIGHTS ...	1	15	7	0.52	0.6	8	245			
CARGO LIGHTS ...	1	15	7	0.52	-	8	max. 100			
ARC LAMPS ...										
HEATERS ...	1	120	37	2.03	160	170	118			

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 Nominal Area per Pole Sq. mm.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP ...										
MAIN BILGE LINE PUMPS ...	2	1	35	7	2.53	64	75	max. 52	Rubber	Lead covered & arm. with galv. steel tap.
GENERAL SERVICE PUMP ...										
EMERGENCY BILGE PUMP ...										
SANITARY PUMP ...										
CIRC. SEA WATER PUMPS ...	2	1	185	37	2.52	224	240	max. 48		
CIRC. FRESH WATER PUMPS... For aux. eng.	1	1	16	7	1.71	45	50	32		
CO ₂ COMPRESSOR ...	1	1	50	19	1.83	80	100	84		
FRESH WATER PUMP ...	1	1	25	7	0.67	7	15	94		
ENGINE TURNING GEAR...	1	1	70	19	2.51	112	-	86		
ENGINE REVERSING GEAR ...										
LUBRICATING OIL PUMPS	2	2	185	37	2.52	400	450	max. 58		
OIL FUEL TRANSFER PUMP...	1	1	16	7	1.71	40	50	66		
WINDLASS ...										
WINCHES, FORWARD										
WINCHES, AFT ...										
STEERING GEAR—										
(a) MOTOR GENERATOR...										
(b) MAIN MOTOR PUMP...	1	1	70	19	2.51	120	120	101		
WORKSHOP MOTOR ...	1	1	6	7	1.05	24	30	70		
VENTILATING FANS										
Lubr. oil separator.	1	1	6	7	1.05	20	30	67		
" " heater.	1	1	150	37	2.3	164	200	73		
fuel oil separator	1	1	6	7	1.05	20	30	82		
" " heater	1	1	150	37	2.3	164	200	76		
Circ. pumps for waste heat boiler.	1	1	6	7	1.05	22	30	26		

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