

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office SEP 19 1938

Date of writing Report 3<sup>rd</sup> SEPT 1938 When handed in at Local Office

Port of HAMBURG.

No. in Survey held at HAMBURG Date, First Survey 23<sup>rd</sup> APRIL Last Survey 23<sup>rd</sup> AUGUST 1938  
Reg. Book.

on the STEEL SH. "ARTHUR F. CORWIN"

Tons { Gross 10516  
Net 6077

Built at HAMBURG By whom built BLOHM &amp; VOSS. Yard No. 512 When built 1938.

Owners ORIENTAL TANKERS LD. Port belonging to LONDON.

Electric Light Installation fitted by BLOHM &amp; VOSS. Contract No. - When fitted 1938.

Is the Vessel fitted for carrying Petroleum in bulk YES.

System of Distribution 2 wire 2 conductor system

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

Direct or Alternating Current, Lighting D.C. Power D.C.

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 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 Have certificates of test results for machines under 100 kw. been submitted and

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

Have certificates for generators under 100 kw. been supplied and approved 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 Engine Room - Port side Forward, 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 Port side. Manoeuvring Platform

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

is it of an approved type 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 - is the non-hygroscopic insulating material of an approved

type - 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, temperature rise of

omnibus bars YES individual fuses to voltmeter, pilot or earth lamp YES, are moving parts of switches alive in the

"off" position NO are all screws and nuts securing connections effectively locked YES are any fuses fitted on the live side of

switches NO Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

Generators: A double pole overload circuit breaker: Outg. Circuit: A double pole change-over switch

Are turbine driven generators fitted with emergency trip switch as per rule YES Are cupboards or compartments containing switchboards composed of

fire-resisting material or lined with approved material YES Instruments on main switchboard 2 ammeters 2

voltmeters YES synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

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

Vollmeter with Ohm scale - pilot lamps Switches, Circuit Breakers and Fusible Cut-outs.

do these comply with the requirements of the Rules YES are the fusible cutouts of an approved type YES have the reversed



current protection devices been tested under working conditions... are all fuses labelled as per rule *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~~ multicore *yes* are the cables insulated and protected as per Tables IV, V, X, XI, XII or XIII of the Rules *yes*

If the cables are insulated otherwise than as per Rule, are they of an approved type *yes* Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *3 kV*

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 *none*, or waterproof insulating tape *yes*

Cable Runs, are the cables sized 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* are cables laid under machines or floorplates *yes* if so, are they adequately protected *yes*

Are cables in machinery spaces, galleys, lavatories, bathrooms and lavatories lead covered or run in conduit *lead covered and armoured*

Support and Protection of Cables, state how the cables are supported and protected *armoured cables clipped - cable troughs*

If cables are run in wood casings, are the casings and caps secured by screws *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, are the cables and fittings in accordance with the special requirements *yes*

Joints in Cables, state if any, and how made, insulated and protected *water tight joints*

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads protected with deck tubes or watertight glands *yes*

Bushes in Decks and Non-watertight Partitions, are the cables passing through beams and non-watertight partitions, are the holes properly sealed *yes* state the material of which the bushes are made *lead*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *yes* 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* position and method of control of the emergency supply and how the generator is driven *yes*

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* are they ventilated as per Rule *yes*

Fittings, are all fittings on weather decks, in storerooms and engine room and where 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*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *Pump room gas tight pockets outside, in deck house.*

where are the controlling switches situated *outside pump room, in bridge deck house.*

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 *yes*

Searchlight Lamps, No. of *1* 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 spaces in which oil or grease does not 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, self-ventilating, flame proof type *yes* if not of this type, state distance of the combustible material horizontally or vertically above the motors *yes*

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing *yes* have certificates for all motors for essential services been supplied and approved *yes*

regulators, starters and controllers constructed and fitted as per Rule *yes* Control Gear and Resistances, are the *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 switch, joint box, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings *yes* are all of the fused 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 flameproof type approved for use in dangerous spaces *yes*

Spare Gear, if the vessel is for open sea service, are spare parts supplied as per Rule *yes* are they suitably stored in dry situations *yes*

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Amps.	Rev. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	2	2x30	115	260	375	Steam Engine			
AUXILIARY									
EMERGENCY									
ROTARY TRANSFORMER									

GENERATOR, LIGHTING AND HEATING CONDUCTORS.									
DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.)	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. In.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	2	120	61	1.59	260	355	15 - 18		
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM			60	Copper bar	75				
BOILER ROOM									
AUXILIARY SWITCHBOARDS	1	0	19	0.64	16	28.7	120		
BRIDGE DE.	1	120	61	1.59	200	177.2	200		
POOP MAIN DE.	1	50	19	1.83	75	98.3	54		
WORKSHOP	1	50	19	1.83	120	102.5	88		
GALLEY	1	70	37	1.53	120	123.7	120		
NAVY LIGHTS	1	2	1	1.6	16	15.5	220	RUBBER	LEAD COVERED
ACCUMULATOR ROOM	1	125	61	1.97	200	233	78		ARMOURD.
TEST BOARD EL SHOP	1	4	19	0.52	25	22.1	26		
REFRIGER. MACH	1	16	19	1.04	43	49	94		
2. BOILER FANS	1	50	19	1.83	80	98.3	50		
LIGHT DE SPACE	1	16	19	1.04	40	49	50		
GYRO COMPASS	1	6	19	0.64	120	28.7	25		
WIRELESS	1	25	19	1.3	30	63.2	19		
SEARCHLIGHT	1	4	19	0.52	10.5	22.1	38		
MASTHEAD LIGHT	1	2.5	1	1.78	9.5	15.5	100		
SIDE LIGHTS	1	2.5	1	1.78	5	15.5	23		
COMPASS LIGHTS	1	2	1	1.6	5	14	25		
POOP LIGHTS	1	2.5	1	1.78	5	15.5	210		
CARGO LIGHTS	1	2.5	1	1.78	5	15.5	126		
HEATERS	1	25	19	1.3	30	63.2	22		
ECHO SOUND	1	2.5	1	1.78	3	15.5	13		

MOTOR CONDUCTORS.										
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.)	Insulated with	HOW PROTECTED.
		No. per Pole.	Total Nominal Area per Pole Sq. In.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP	1	1	4	19	0.52	17	22.1	16		
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS	1	1	2.5	1	1.78	4	15.5	16		
REF. COMPRESSOR	1	1	16	19	1.04	52.3	49	15		
FRESH WATER PUMP	1	1	2.5	1	1.78	4.3	15.5	21		
ENGINE TURNING GEAR	1	1	35	19	1.04	84	77.7	24		
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS	1	1	2.5	1	1.78	7.4	15.5	16		
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
LUB. OIL SEPARAT	1	1	2.5	1	1.78	12.6	15.5	34		LEAD COVERED
WINCHES, AFT										
STEERING GEAR INDICATOR TRANSFORMER	1	1	2.5	1	1.78	25.7	15.5	20		
(a) MOTOR GENERATOR										
TELE. (b) MOTOR	1	1	10	19	0.82	12	38.1	20		
WORKSHOP MOTOR										
VENTILATING FANS 2.3	2	1	16	19	1.04	49	49	6 - 28		
LATHES No. 1	1	1	25	19	1.3	58	63.2	16		
No. 2	1	1	2.5	1	1.78	1.6	15.5	24		
SHARP MACHINE	1	1	6	14	0.64	21	28.7	16		
GRIND. "	1	1	2.5	1	1.78	11.5	15.5	28		
DRILLING "	1	1	4	19	0.52	21.6	22.1	24		



The Electrical Equipment is installed in accordance with the approved plans.  
All Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.  
The foregoing is a correct description.

The Guilders are the

Electrical Engineers.

Date

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass 60 m.

Minimum distance between electric generators or motors and steering compass 65 m.

The nearest cables to the compasses are as follows:—

A cable carrying .36 Amperes close to standard compass. close to steering compass.

A cable carrying — Amperes — feet from standard compass. — feet from steering compass.

A cable carrying — Amperes — 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 nil degrees on any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

für Blohm & Voss.

G. Meyer.

Builder's Signature.

Date

5th SEP. 1938

Is this installation a duplicate of a previous case yes If so, state name of vessel "SEMINOLE" with slight difference of plant. Gen. 21912.

General Remarks (State quality of workmanship, opinions as to class, etc. Material and workmanship)

of this Electric Installation are of good quality. It has been fitted in accordance with the approved plans, the Secretary's Letter, and other wise in compliance with the requirements of the Rules and has given full satisfaction under working conditions and full load.

Meyer

20/9/38

Total Capacity of Generators 60 Kilowatts.

The amount of Fee ... RM. 570: When applied for, 15/9 1938

Travelling Expenses (if any) £ : : When received, 4/10 1938

Committee's Minute 19th SEP 1938

Assigned Sec. F. G. Rpt.

Friedrich Hill  
Surveyor to Lloyd's Register of Shipping.



© 2020

Lloyd's Register  
Foundation