

Rpt. 13.

No. 86948

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 31 MAR 1931

Received at London Office

Date of writing Report

19

When handed in at Local Office

30/3/31

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at NEWCASTLE ON TYNE

Date, First Survey

27 Nov 30

Last Survey

18 March 1931

Reg. Book.

89457 on the M.V. AGNITA

Tons { Gross
Net

Built at NEWCASTLE ON TYNE

By whom built HAWTHORN LEE & CO LTD

Yard No. 578

When built 1931

Owners PETROLEUM MAATS LA CORONA

Port belonging to THE HAGUE

Electric Light Installation fitted by HAWTHORN LEE & CO LTD.

Contract No. 578

When fitted 1931

Is the Vessel fitted for carrying Petroleum in bulk YES.

System of Distribution

Double Wire

Pressure of supply for Lighting

110

volts, Heating

—

volts, Power

110

volts.

Direct or Alternating Current, Lighting

Direct

Power

Direct

alternating current system, state frequency of periods per second

Is 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

they over compounded 5 per cent.

Yes

if not compound wound state distance between each generator

Are 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

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

Yes

are they so spaced or shielded that they cannot be accidentally earthed,

or short circuited, or touched

Yes

Are the lubricating arrangements of the generators as per Rule

Yes

Position of Generators

Engine Room, Starboard Side

Is the ventilation in way of the generators satisfactory

Yes

are they clear of all inflammable material

Yes

Are generators 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

Are the bedplates and frames of the generating plant efficiently earthed

Yes

are the prime movers and

or respective generators in metallic contact

Yes

Position of Switch Boards, where placed

Engine Room, Starboard Side

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

a cable run 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

sufficiently high insulation resistance

Yes

if semi-insulating material is used, are all conducting parts insulated from the slab

by mica or micaite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework

Yes

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

proportion of omnibus

Yes

individual fuses to voltmeter, pilot or earth lamp

Yes

connections of switches

Yes

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

Double Pole Switches

and fuses for generators; Double Pole Change-over switches & fuses or Double Pole Circuit breakers for outgoing circuits

Instruments on main switchboard

2

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

Earth lamps

coupled to earth through switches and fuses

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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Lloyd's Register
Foundation

Cables: Single, twin, concentric, or multicore Single 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 4 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 —

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 Lead covered in Accommodation secured with brass clips, Lead covered and Unarmoured in Machinery Spaces. Main cables Lead covered and Unarmoured carried in pipes on Deck.

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, 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 Home 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 —

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 none fitted

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 —

—, how are the cables led

where are the controlling switches situated —

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

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 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	1	12	110	109	350	S.C. Steam Engine		
AUXILIARY ...	1	12	110	109	350	Kromhout oil Engine		
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	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 ...	1	0.14780	37	.072	109	152	50	V.I.R.	L.C. & A.
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR ...									
ENGINE ROOM ...	1	0.03960	19	.052	24.4	64	50	do	do
BOILER ROOM ...									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION AFT ...	1	0.01462	7	.052	22.2	37	80	do	do
do MIDSHIP & FWD	1	0.03960	19	.052	26.5	64	300	do	do
NAVIGATION	1	0.00465	7	.029	1.8	18.2	320	do	do
WIRELESS	1	0.01462	7	.052	30	37	100	do	do
SEARCHLIGHT									
MASTHEAD LIGHT	1	0.00194	3	.029	.3	7.8	220	do	do
SIDE LIGHTS	1	0.00194	3	.029	.3	7.8	120	do	do
COMPASS LIGHTS	1	0.00194	3	.029	.1	7.8	30	do	L.C.
STEER LIGHTS	1	0.00194	3	.029	.3	7.8	480	do	L.C. & A.
CARGO LIGHTS	1	0.03960	19	.052	15.2	64	300	do	do
ARC LAMPS									
HEATERS									

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										
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	1	1	0.10090	19	.083	109	118	200	V.I.R.	L.C. & A.
ENGINE REVERSING GEAR	1	1	0.00701	7	.036	16	24	190	do	do
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										
DRILLING MACHINE	1	1	0.00701	7	.036	16	24	60	do	do
GRINDING do	1	1	0.01046	7	.044	24	31	60	do	do
LATHE MOTOR	1	1	0.00701	7	.036	16	24	60	do	do
OIL SEPARATOR No. 1.	1	1	0.00701	7	.036	16	24	80	do	do
do do No. 2	1	1	0.00701	7	.036	16	24	90	do	do

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.

FOR R. & W. HAWTHORN, LESLIE & CO. LIMITED.

me [Signature]

Electrical Engineers.

Date 28/3/31

COMPASSES.

Distance between electric generators or motors and standard compass 150 feet approx.

Distance between electric generators or motors and steering compass 150 feet d.

The nearest cables to the compasses are as follows:—

A cable carrying .1 Ampères on the feet from standard compass 8 feet from steering compass.

A cable carrying .1 Ampères 8 feet from standard compass on the feet from steering compass.

A cable carrying 1.8 Ampères 14 feet from standard compass 7 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 all courses in the case of the standard compass, and nil degrees on all courses in the case of the steering compass.

FOR R. & W. HAWTHORN, LESLIE & CO. LIMITED.

me [Signature]

Builder's Signature.

Date 28/3/31

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. This installation has been fitted on board under special survey and has been tested under full working conditions and found satisfactory. The materials and workmanship were found to be good and sound.

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

Elec. Light

[Signature] 45727

Total Capacity of Generators 24 Kilowatts.

The amount of Fee ... £ 19 : 10 : 25.3-19.31

Travelling Expenses (if any) £ : : 28.3-19.31

L. C. Clayton

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Elec. Lt.