

REPORT ON ELECTRICAL EQUIPMENT.

No. 4975

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

29 JAN 1945

Date of writing Report 22nd July 44

When handed in at Local Office 7th Dec. 44

Received at London Office

No. in Survey held at Valencia

Port of Barcelona

Reg. Book.

Date, First Survey 12th July Last Survey 10th Aug. 1943

on the M/V "VIRGEN DEL PILAR"

(Number of Voids 7)

Built at Valencia

By whom built Union Naval de Levante Yard No. 41

Gross 399.66

Net 181.77

Owners D. Vicente Anselat

When built 1944

Electric Light Installation fitted by Union Naval de Levante

Port belonging to Palma de Mallorca

Is the Vessel fitted for carrying Petroleum in bulk no

Contract No. / When fitted 1943

System of Distribution Constant pressure, independent, 2 wire system.

Pressure of supply for Lighting 110

volts, Heating /

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 compound wound yes

are they over compounded 5 per cent. /

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

approved no

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

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

Position of Generators Diesel Gen. eng. room centre (ps)

Gen. driven by M. eng. intermediate shaft engine room aft. (ps)

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 /

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 At eng. room (ps) above platform level

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 same compartment

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes yes

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 /

materials yes

are they constructed wholly of durable, non-ignitable non-absorbent materials 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 micaite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework yes

type yes

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

yes

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

yes

absence of fuses on back of board yes

omnibus bars /

individual fuses to voltmeter, pilot or earth lamp yes

"off" position no

are all screws and nuts securing connections effectively locked yes

switches no

are any fuses fitted on the live side of Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

ordinary or normal blade or rotatory switches

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

Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material yes

voltmeters /

Instruments on main switchboard one

ammeters one

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

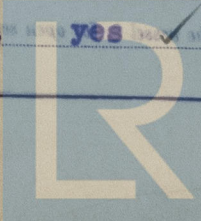
Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system by means of two lamps connecting each pole to earth

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



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current protection devices been tested under working conditions / 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 multicores **yes** are the cables insulated and protected as per Tables IV, V, X or XI of the Rules **yes**
If the cables are insulated otherwise than as per Rule, are they of an approved type **yes**
any point of the installation under maximum load **2.2 volts**
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, are the cables insulated and protected as per Tables IV, V, X or XI of the Rules **yes**
Cable Runs, are the cables fixed as far as possible in accessible positions **yes**
Support and Protection of Cables, state how the cables are supported and protected **yes**
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**
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 **not joints**
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 **none, cables armature is in contact with steel bulkhead**
are their connections made as per Rule **yes**
Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule **none**, Emergency Supply, state position and method of control of the emergency supply and how the generator is driven **none**
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 **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 **yes**
where are the controlling switches situated **yes**
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 **5 of 200 W**, whether fixed or portable **fix & portable**, are their fittings as per Rule **yes**
Arc Lamps, other than searchlight lamps, No. of **2 of 300 W**, are their live parts insulated from the frame or case **yes**, 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 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 **no**, 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 **yes**
field and motor speed regulators, starters and controllers constructed and fitted as per Rule **yes**
are required, are these fitted as per Rule **yes**
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 fitted 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 **yes**
Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule **yes**

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.	Oil Used.	Pressure Point or Fuel.
MAIN ...	2	6	110	54.5	1000	Oil engine	fuel oil	above 1500 F.	
AUXILIARY ...	2	110	18.2	1000	M. eng. intermediate				
EMERGENCY ...									
ROTARY TRANSFORMER									

GENERATOR, LIGHTING AND HEATING CONDUCTORS.									
DESCRIPTION.	No. per Pole.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.)	Insulated with
		Total Nominal Area per Pole Sq. Inch.	No.	No.	Diameter.	Circuits.	Rate.		
MAIN GENERATOR ...	1	28.7	19	1.6	54.5	85	15	Rubber	Lead & met. braid
EQUALISER CONNECTIONS ...	1	12	14	0.8	18.2	41.7	18		
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER MOTOR GENERATOR ...									
ENGINE ROOM ... P.S.	1	1.77	1	1.5	0.8	8.6	20		
BOILER ROOM ... S.S.	1	1.77	1	1.5	0.8	8.6	20		
AUXILIARY SWITCHBOARDS ...									
Aux. station No 1	1	4.5	7	0.9	13.7	24	18		
Aux. station for navigation light	1	1.50	7	0.5	6.4	6.5	15		
ACCOMMODATION ...									
	1	1.50	7	0.5	0.83	6.5	32		
WIRELESS SEARCHLIGHT ...	1	1.50	7	0.5	2.7	6.5	90		
SEARCHLIGHT ... S.S.	1	1.50	7	0.5	2.7	6.5	90		
MASTHEAD LIGHT ...									
SIDE LIGHTS ...									
COMPASS LIGHTS ...									
POOP LIGHTS ...									
CARGO LIGHTS ...									
ARC LAMPS fore & aft	1	1.50	7	0.5	0.83	6.5	90		
HEATERS ...									

MOTOR CONDUCTORS.									
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.)	Insulated with
		No. per Pole.	Total Nominal Area per Pole Sq. Inch.	No.	Diameter.	Circuits.	Rate.		
BALLAST PUMP ...									
MAIN BILGE LINE PUMPS ...	1	1	6	7	1	20	47.3	30	Rubber Lead & met. braid
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 ...	1	1	6	7	1	10	47.3	18	
WINDLASS ...									
WINCHES, FORWARD	1	1	8	7	1	13.3	47.3	8	
WINCHES, AFT									
STEERING GEAR—									
(a) MOTOR GENERATOR ...									
(b) MAIN MOTOR ...									
WORKSHOP MOTOR ...									
VENTILATING FANS ...									
oil separator	1	1	12	14	1	13.3	47.3	24	

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28)
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

smallest 30 mts.

Distance between electric generators or motors and steering compass

30 mts.

The nearest cables to the compasses are as follows:—

A cable carrying 0.63 Ampères feet from standard compass 1.50 mts feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

A cable carrying Ampères 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 degrees on

course in the case of the standard

compass, and degrees on

course in the case of the steering compass.

UNION NAVAL DE LEVANTE, S. A.

Factoria de Valencia

P.P.

Builder's Signature.

Date

Is this installation a duplicate of a previous case

yes

If so, state name of vessel

"VIRGEN DE LA ESPERANZA"

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

This installation has been satisfactorily fitted in accordance with the Rules and approved plans, all tests have been carried out as required by the Rules.

The material and workmanship are good.

Plans showing installation as fitted on board are enclosed herewith.

In my opinion this installation is eligible to be classed in this Society.

Total Capacity of Generators 8 8 8.74 Kilowatts.

The amount of Fee ... Ptas. 480.-

When applied for,

22-7-44

Travelling Expenses (if any) £

When received.

/

Committee's Minute

FRI, 13 JUL 1945

Assigned

See for machy report



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