

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

25 NOV 1946

Date of writing Report 26/9/46 19... When handed in at Local Office 26/9/46 19... Port of Valparaiso.

No. in Survey held at Valparaiso. Date, First Survey 24/6/46 Last Survey 20/9/46 19...
(Number of Visits.....)

Reg. Book. on the Whaler "Indus VI" ex "Skudd IV" Tons { Gross 294
Net 51

Built at Oslo By whom built Nylands Vaerksted Yard No. When built 1929

Owners Cia. Industrial de Valparaiso. Port belonging to Valparaiso.

Electric Light Installation fitted by Contract No. When fitted

Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Two conductors DC

Pressure of supply for Lighting 100 volts, Heating -- volts, Power -- volts.

Direct or Alternating Current, Lighting DC 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 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 there is only 1 generator. 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 no certificates Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing no machines over 100 Kw.

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 Shaft of generator in direction (popa o proa) fore & aft, 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 very far from combustible material

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 one switch board placed in Engine Room, Starboard side.

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 Generator & switchboard in same compartment.

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 none near, 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 Yes, is the non-hygroscopic insulating material of an approved type Yes, 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 D.P., knife type circuit switches & main switches are of the same type. There are no equalizer switches.

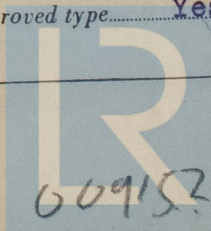
Are turbine driven generators fitted with emergency trip switch as per rule None Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material None Instruments on main switchboard One ammeters One volt-meters No synchronizing device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equalizer connection

There is no equalizer connection

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

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



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609153-009160-0044

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current protection devices been tested under working conditions. Nil 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 or XI of the Rules. Yes

If the cables are insulated otherwise than as per Rule, are they of an approved type. -- Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 2 1/2 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.

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. Nil, 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. Yes Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered xxxxxxx lead covered.

Support and Protection of Cables, state how the cables are supported and protected metal clips spaced as per rule metal trays.

If cables are run in wood casings, are the casings and caps secured by screws. Nil, 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. Nil

Joints in Cables, state if any, and how made, insulated, and protected Nil

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 Dynamo:- 3 sq.inches which is bolted to frames of the vessel. Switchboard:- 2 sq.inches which is bolted to frames of the vessel. 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 Nil

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 No Secondary Batteries, are they constructed and fitted as per Rule. Nil

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 Nil

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected Nil how are the cables led Nil

where are the controlling switches situated --

are all fittings suitably ventilated --, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials --

Heating and Cooking Appliances, are they constructed and fitted as per Rule Nil, are air heaters constructed and fitted as per Rule --

Searchlight Lamps, No. of Nil, whether fixed or portable --, are their fittings as per Rule --

Arc Lamps, other than searchlight lamps, No. of Nil, are their live parts insulated from the frame or case. --, are their fittings as per Rule. --

Motors, are their working parts readily accessible Nil, 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 axes 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 -- have machines of over 100 BPH 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. -- Lightning Conductors, where lightning conductors are required, are these fitted as per Rule. Nil 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. flash point above 150° are all fuses of the filled cartridge type. -- are they of an approved type. -- 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. Nil

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT			DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.			
		Kilowatts.	Volts.	Amperes.		Rev. per Min.	Fuel Used.	Flash Point of Fuel.	
MAIN ...	One	8	100	80	350	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.) Feet.	Insulated with	HOW PROTECTED
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.			
MAIN GENERATOR	1	.0600	19	.064	80	83	12	VR	Lead
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER (MOTOR GENERATOR)									
ENGINE ROOM	1	.0020	3	.029	6	7.8	25	VR	Lead
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION									
Frd.	1	.0020	3	.029	4	7.8	140	VR	Lead
Aft	1	.0020	3	.029	3.5	7.8	50	VR	Lead
Midships	1	.0030	3	.036	10	12	80	VR	Lead
Navigation	1	.0020	3	.029	4	7.8	90	VR	Lead
WIRELESS	1	.0020	3	.029	4	7.8	90	VR	Lead
SEARCHLIGHT									
MASTHEAD LIGHT	1	.0020	3	.029	0.5	7.8	170	VR	Lead
SIDE LIGHTS	1	.0020	3	.029	0.5	7.8	24	VR	Lead
COMPASS LIGHTS	1	.0020	3	.029	0.3	7.8	20	VR	Lead
POOP LIGHTS	1	.0020	3	.029	0.5	7.8	140	VR	Lead
CARGO LIGHTS									
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 Nominal 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										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										

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 48'

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying .3 Ampères 1 feet from standard compass -- 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 Nil degrees on any course in the case of the standard compass, and -- degrees on -- course in the case of the steering compass.

Builder's Signature.

Date

Is this installation a duplicate of a previous case. If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c. The electrical installation of this vessel as now seen is in safe working condition & eligible in my opinion suitable for a classed Whaler.

Total Capacity of Generators 8 Kilowatts.

The amount of Fee See Report 9. When applied for, 19. When received, not paid to date.

Committee's Minute FM. 18 JUL 1947

Assigned See minute on je machy rpt.

Chas R Rowcliffe
Surveyor to Lloyd's Register of Shipping.