

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

29 MAR 1928

Date of writing Report 22nd March 1928 When handed in at Local Office

19

Port of HAMBURG

No. in Survey held at

KIEL

Date, First Survey 30th Nov. 27Last Survey 12th March

1928

Reg. Book.

on the Steel Tr. S. S. V. "PACIFIC PRESIDENT"

(Number of Visits 16)

Tons

Gross 7114

Net 4316

When built 1928

Built at

KIEL

By whom built

DEUTSCHE WERKE AG

Yard No. 212

Owners

TRANS-OCEANIC S. S. CO

Port belonging to

LONDON

Electric Light Installation fitted by

DEUTSCHE WERKE A. G.

Contract No.

When fitted 1928

System of Distribution

Two wire insulated with direct current.

Pressure of supply for Lighting

220

volts, Heating

volts, Power

220

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 rating.

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.

yes

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, short circuited, or touched

yes

Are the lubricating arrangements of the generators as per Rule

yes

Position of Generators

main engine room - 2 Port - 1 Starboard

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

yes

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

main engine room aft on elevated 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 (Pencils)

is all insulation of high dielectric strength and of permanently high insulation resistance

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

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

proportion of omnibus bars

yes

individual fuses to voltmeter, pilot or earth lamp

yes

connections of switches

yes

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

For each generator: 1. circuit breaker with overload and reverse current trips and a single-pole equalizer switch interlocked with the circuit breaker, that the equalizer switch must be closed before the circuit breaker. For each outgoing circuit: a fuse on each pole and a single-pole switch on one pole.

Instruments on main switchboard

8

ammeters

4

voltmeters

1

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

Voltmeter with

Ohm Scale

Switches, 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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Cables: Single, twin, concentric, or multicore *ye* *The German standards have been applied*
are the cables insulated and protected as per Tables IV or V of the Rules *Generally*
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 *ye*

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 *in paper insulator tubes*

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 *ye*

Support and Protection of Cables, state how the cables are supported and protected *in troughs where they are supported*
mechanical risk covered by protection

If cables are run in wood casings, are the casings and caps secured by screws *ye*, are the cap screws of brass *ye*, are the cables run in separate grooves *ye*. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII *ye*

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements *Portable lamps in Ventilation Room*

Joints in Cables, state if any, and how made, insulated, and protected *Reheat light joint, lower*

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

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed *ye*, state the material of which the bushes are made *lead*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *ye*, are their connections made as per Rule *ye*

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule *ye*

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven *Driven by 3 cyl. 45 C.S.P. Diesel engine with hand starting arrangement connected to main switch board*

Navigation Lamps, are these separately wired *ye*, controlled by separate switch and separate fuses *ye*, are the fuses double pole *ye*, are the switches and fuses grouped in a position accessible only to the officers on watch *ye*, in wheel house *ye*, has each navigation lamp an automatic indicator as per Rule *ye*

Secondary Batteries, are they constructed and fitted as per Rule *ye*

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and where exposed to drip or condensed moisture, watertight *ye*, 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 *ye*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *ye*

how are the cables led *ye*

where are the controlling switches situated *ye*

Searchlight Lamps, No. of *1*, whether fixed or portable *1*, are their fittings as per Rule *ye*

Arc Lamps, other than searchlight lamps, No. of *0*, are their live parts insulated from the frame or case *ye*, are their fittings as per Rule *ye*

Motors, are their working parts readily accessible *ye*, are the coils self-contained and readily removable for replacement *ye*, are the brushes, brush holders, terminals and lubricating arrangements as per Rule *ye*, are the motors, placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material *ye*

are they protected from mechanical injury and damage from water, steam or oil *ye*, are their axes of rotation fore and aft *ye*

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 *ye*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *ye* and *ye*

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule *ye*

Lighting Conductors, where lighting conductors are required, are these fitted as per Rule *See main*

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 *ye*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *ye*

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	3	325	230	977	300	4 cyl. 45 C.S.P. Diesel	Gas oil.	170°
AUXILIARY						in clor.		
EMERGENCY	1	15	220	68	800	2 cyl. 45 C.S.P. Diesel	Gas oil.	
						with injection.		
ROTARY TRANSFORMER								

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor Sq. Ft.	COMPOSITION OF STRAND.		Total Maximum Current in Amps.	Approximate Length (Lead and Return) in Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	2x2	200	61	2.5	1000	2x30		
	EQUALISER CONNECTIONS	1x2	240	37	2.5	25	2x30		
	AUXILIARY GENERATOR	2x1	185	7	2.1	70	2x25		
	EMERGENCY GENERATOR	2x1	25	7	2.1	70	2x25		
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	Accommodation	4x1	95	19	2.5	300	2x20		
	Midship	2x1	290	61	2.25	650	2x70		
	Midship	2x1	150	27	2.25	300	2x40		
	Midship	2x1	150	27	2.5	600	2x60		
	Saloon	2x1	16	7	1.7	18	2x60		
	Midship	2x1	16	7	1.7	18	2x40		
	Midship	2x1	10	7	1.35	12	2x25		
	Midship	2x1	10	7	1.35	12	2x25		
	Cargolights	2x1	16	7	1.7	18	2x60		
		2x1	10	7	1.35	15	2x70		
	WIRELESS	2x1	16	7	1.7	30	2x40		
	SEARCHLIGHT	2x1	10	7	1.35	25	2x80		
	MASTHEAD LIGHT	2x1	1.5	1	1.4	0.3	2x60		
	SIDE LIGHTS	2x1	1.5	1	1.4	0.3	2x15		
	COMPASS LIGHTS	2x1	1.5	1	1.4	0.45	2x10-2x10		
	POOP LIGHTS	2x1	1.5	1	1.4	0.3	2x80		
	CARGO LIGHTS								
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor Sq. Ft.	COMPOSITION OF STRAND.		Total Maximum Current in Amps.	Approximate Length (Lead and Return) in Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP	1	50	19	1.85	110	2x30		
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP	2	10	7	1.35	25	2x25		
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	C/O SEA WATER PUMPS	2	95	19	2.5	168	2x30		
	C/O FRESH WATER PUMPS	1	1.5	1	1.4	4	2x15		
	AIR COMPRESSOR	2	300	61	2.25	345	2x30		
	FRESH WATER PUMP	1	4	1	2.25	20	2x25		
	ENGINE TURNING GEAR	1	4	1	2.25	16	2x25		
	ENGINE REVERSING GEAR	2	10	7	1.35	32	2x20		
	LUBRICATING OIL PUMPS	3	10	7	1.35	34	2x20		
	OIL FUEL TRANSFER PUMP	2	6	1	2.75	34	2x20		
	WINDLASS	1	185	37	2.5	350	2x90		
	WINCHES, FORWARD	6	20	19	2.15	150			
	WINCHES, AFT (incl. Steering Gear)	2							
	STEERING GEAR								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR	50	19	1.85	180	2x60			
	WORKSHOP MOTOR	1	4	1	2.25	16	2x25		
	VENTILATING FANS	2	2.5	1	1.8	10	2x10		
	CO ₂ Compressor (Main)	2	180	37	2.05	190	2x30		
	CO ₂ Water Pump	1	6	1	2.75	24.5	2x25		
	CO ₂ Grind Pump	2	16	7	1.7	44	2x30		
	Refrigerator Pump	4	16	7	1.7	40	2x35		
	Provisioning Pump	1	16	7	1.7	42	2x35		
	Grind Pump	1	2.5	1	1.8	12	2x25		
	Oil Separator	3	2.5	1	1.8	10	2x30		
	Emergency Main	1	1.5	1	1.4	6	2x45		
	See for Catalog	1	2.5	1	1.8	12	2x30		

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.

The Guilders are the Electrical Engineers. Date ✓

COMPASSES.

Distance between electric generators or motors and standard compass 10 in.

Distance between electric generators or motors and steering compass 10 in. } double wired.

The nearest cables to the compasses are as follows:—

A cable carrying 0.15 Amperes close to feet from standard compass close to feet from 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 — course in the case of the standard compass, and nil degrees on — course in the case of the steering compass.

Deutsche Werke Kiel
Aktiengesellschaft

Builder's Signature.

Date 22nd March 1928

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. Workmanship and material of)

this Electric Installations are of good quality, As the conductors
used are of the German Standard, the Society's Rules respecting
conductors have been applied generally. The Installation is
built and fitted under Special Survey in accordance with
the approved plans, the Society's letter and otherwise in
conformity with the requirements of the Rules and is
eligible in my opinion for record of 'ELECT. LIGHT.'

Total Capacity of Generators 690 Kilowatts.

The amount of Fee ... £ 48:15: When applied for, 24.3.28

Travelling Expenses (if any) £ — : — : When received, 12.5.28

Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 8 AUG 1928

FRI. 21 SEP 1928

Assigned Dec light