

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office... 14 JUL 1926

Date of writing Report 10<sup>th</sup> July 1926 When handed in at Local Office 10 Port of HAMBURG

No. in Survey held at HAMBURG Date, First Survey 23<sup>rd</sup> March Last Survey 26<sup>th</sup> June 1926  
 Reg. Book. 38543 on the Twin Screw Motor Vessel CHINESE PRINCE (Number of Visits 17) Tons { Gross 6734  
 Net 3656

Built at HAMBURG By whom built Deutsche Werft A.G. Yard No. 95 When built 1926

Owners RIO-CAPE-LINE Ltd. Port belonging to LONDON

Electric Light Installation fitted by Deutsche Werft A.G. Contract No. - When fitted 1926

System of Distribution Two wire insulated ✓ volts, Power 220 ✓ volts.

Pressure of supply for Lighting 220 ✓ volts, Heating ✓ Power direct ✓

Direct or Alternating Current, Lighting 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 ✓, are they compound wound yes ✓

Generators, do they comply with the requirements regarding rating 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 ✓

Position of Generators Engine room port side ✓, are they clear of all inflammable material yes ✓

is the ventilation in way of the generators satisfactory 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 ✓, are the prime movers and Earthing, are the bedplates and frames of the generating plant efficiently earthed yes ✓

their respective generators in metallic contact yes ✓

Main Switch Boards, where placed 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 ✓, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards ✓

are they protected from mechanical injury and damage from water, steam or oil yes ✓, are they constructed wholly of durable, non-ignitable non-absorbent materials yes, kenasite ✓, 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 ✓, connections of switches yes ✓, proportion of omnibus bars 10 x 60 mm ✓, individual fuses to voltmeter, pilot or earth lamp yes ✓

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches For each generator: a double pole circuit breaker with overload and reversed current trips, and an equalizer switch interlocked with a switch in the negative main leading from the dynamo to the switch board.

For each outgoing circuit: a fuse on each pole and a single pole switch on one pole

Instruments on main switchboard 3 ammeters ✓, 5 ✓ 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 One of the Voltmeters is fitted with an Ohm scale for measuring of the insulation ✓

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 ✓

1	1.5	1	2.25	30	16
		1	1.4	2.5	30-30
					28

*The German standards have been applied generally*

**Cables:** Single, twin, concentric, or multicore *single & twin* are the cables insulated and protected as per Tables IV or V of the Rules.

**Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load *about 3 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 *no paper insulated cables*

**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 *armoured cables supported by clips, in accommodation room lead covered cables or rubber insulated cables in wooden casings*

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*. 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 *yes*

**Joints in Cables,** state if any, and how made, insulated, and protected *yes water-tight joint boxes*

**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 *armoured cables* state the material of which the bushes are made *—*

**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 *—*

**Fittings,** are all fittings on weather decks, in stokeholds and engine rooms 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 *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 *—*

where are the controlling switches situated *—*

**Searchlight Lamps, No. of** *none*, whether fixed or portable *—*, are their fittings as per Rule *—*

**Arc Lamps,** other than searchlight lamps, No. of *none*, 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* *with exception of the turning gear motor*, 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 *steel masts*

**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 *—*

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

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	100	225	445	300/400	Diesel Motor 4 C. I. C.	Diesel Motor Oil 170° F.	
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins. mm <sup>2</sup> or Sq. Ins.	COMPOSITION OF STRANDS.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet, m.	Insulated with	HOW PROTECTED.
				No.	Diameter. mm.				
	MAIN GENERATOR	4	2 x 120	37	2.05	445	15/20/25		
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	12 x 2	1.5	1	1.4	12 x 4	20-50		
	BOILER ROOM								
	ACCOMMODATION OFFICERS	2	16	7	1.7	20	25		
	Subdivisions	1	2	4	1	2.25	4	25	
	"	2	2	4	1	2.25	4	20	
	"	3	2	4	1	2.25	4	25	
	"	4	2	4	1	2.25	4	25	
	Near Lamps incl. Fore castle	2	25	7	2.1	15	75	rubber lead covered & armoured	
	Wireless foremast	4	2 x 150	37	2.25	600	2 x 60		
	" midship	4	2 x 300	61	2.5	1800	2 x 72	half hour sailing	
	" aft	4	2 x 120	37	2.05	470	2 x 24		
	WIRELESS	2	4	1	2.25	7	40		
	SEARCHLIGHT								
	MASTHEAD LIGHT	2	1.5	1	1.4	0.15	170		
	SIDE LIGHTS	2	1.5	1	1.4	0.30	20		
	COMPASS LIGHTS	2	1.5	1	1.4	0.60	20		
	POOP LIGHTS	2	1.5	1	1.4	0.15	170		
	CARGO LIGHTS	18 x 2	1.5	1	1.4	2.5	10-20		
	ARC LAMPS								
	HEATERS								

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins. mm <sup>2</sup> or Sq. Ins.	COMPOSITION OF STRANDS.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet, m.	Insulated with	HOW PROTECTED.
				No.	Diameter. mm.				
	BALLAST PUMP	1	20	19	2.5	120	50		
	MAIN BRIDGE LINE PUMPS	2	16	7	1.7	53.5	50		
	Oil Compressor	1	16	7	1.7	34	42		
	General Service Pump	1	16	7	1.7	8	3 x 8		
	Handless Oil Separator	3	2.5	1	1.8	8	36		
	EMERGENCY DILUTION PUMP	1	2.5	1	1.8	8	36		
	Brine pump	1	2.5	1	1.8	8	36		
	SANITARY PUMP	1	2.5	1	1.8	8	36		
	CIRC. SEA WATER PUMPS	2	95	19	2.5	154	60		
	CIRC. FRESH WATER PUMPS	1	35	19	1.55	82	50		
	AIR COMPRESSOR								
	FRESH WATER PUMP	1	1.5	1	1.4	4.3	30		
	ENGINE TURNING GEAR	2	6	1	2.75	35	20		
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	2	35	19	1.55	73	12		
	OIL FUEL TRANSFER PUMP	2	16	7	1.7	24.5	40		
	WINDLASS	1	95	19	2.5	181	40		
	WINCHES, FORWARD							rubber lead covered & armoured	
	WINCHES, AFT								
	STEERING GEAR								
	(a) MOTOR GENERATOR	2	35	19	1.55	85	5		
	(b) MAIN MOTOR	2	35	19	1.55	85	95		
	WORKSHOP MOTOR	1	4	1	2.25	18	16		
	VENTILATING FANS	3	1.5	1	1.4	2	4		
	5 Key Winches I & E port	2	35	19	1.55	80	16		
	5 " " I & E starb	2	35	19	1.55	80	26		
	3 " " III port	1	16	7	1.7	50	40		
	3 " " III starb	1	16	7	1.7	50	46		
	3 " " IV port	1	16	7	1.7	50	50		
	3 " " IV starb	1	16	7	1.7	50	46		
	5 " " V port	1	35	19	1.55	80	12		
	5 " " V starb	1	35	19	1.55	80	28		
	5 " " VI & VII port	2	35	19	1.55	80	16		
	5 " " VI & VII starb	2	35	19	1.55	80	28		
	5 " " VIII port	1	35	19	1.55	80	46		
	5 " " VIII starb	1	35	19	1.55	80	16		
	Changin oil transformer	1	2.5	1	1.8	3	30-30		
	Lab. Experiments	2	6	1	2.75	30	28		
	Boiler fan	1	1.5	1	1.4	2.5			

M1126-0174

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 Builders are the Electrical Engineers. Date                     

**COMPASSES.**

Distance between electric generators or motors and standard compass 25 m

Distance between electric generators or motors and steering compass 26 m

The nearest cables to the compasses are as follows:—

A cable carrying 0.5 Ampères close to feet from standard compass close to 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 with

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 WERFT  
 AKTIENGESELLSCHAFT.**

*[Handwritten Signature]*

Builder's Signature. Date 10.7.26

Is this installation a duplicate of a previous case yes If so, state name of vessel Faranus Prince

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

installation are of good quality. All the conductors used are of "German  
Standard". The Society's Rules respecting conductors have been applied generally.  
The installation have been fitted in accordance with the approved plans, the  
Secretary's letters and otherwise in conformity with the requirements of the  
Rules and having been built and fitted under Special Survey, it is eligible  
in my opinion for record of "Electric Light"

**It is submitted that  
 this vessel is eligible for  
 THE RECORD. Elec. Light.**

*[Handwritten Signature]*  
 16/7/26

Total Capacity of Generators 300 Kilowatts.

The amount of Fee ... £ 39:0:0 { When applied for, 28th June 1926.  
 Travelling Expenses (if any) £ : : { When received, 27/7/26

*[Handwritten Signature]*  
 Surveyor to Lloyd's Register of Shipping.

TUES. 20 JUL 1926

Committee's Minute                       
 Assigned Elec Light

Im. 126. - Transfer. (The Surveys are requested not to write on or back to the space for Committee's Minute.)