

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

JUN -5 1940

Received at London Office.....

Date of writing Report 23rd May, 1940 When handed in at Local Office.....19..... Port of MissendenNo. in Survey held at South Bank on 2nd Date, First Survey 18th April Last Survey 23rd May, 1940
Reg. Book. Suppl. (Number of Visits.....)39924 on the S.S. "LANCASTRIAN PRINCE" Tons {Gross 1913.73
Net 919.51Built at South Bank on 2nd By whom built Smith's Dock Co. Ltd. Yard No. 1067 When built 1940Owners Prince Line Ltd. Port belonging to LondonElectrical Installation fitted by Richard Pickering & Co. Ltd. Contract No. 1067 When fitted 1940Is vessel fitted for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. YesHave plans been submitted and approved Yes System of Distribution Double wire Voltage of supply for Lighting 110Heating Yes Power 110 Direct or Alternating Current, Lighting Yes Power Yes If Alternating Current state frequency Yes Prime Movers,has the governing been tested and found efficient when the whole load is suddenly thrown on and off Yes Are turbine emergency governors fitted with atrip switch as per Rule Yes Generators, are they compound wound Yes, are they level compounded under working conditions Yes,if not compound wound state distance between generators Yes and from switchboard Yes Where more than one generator is fitted are theyarranged to run in parallel Yes, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive polePositive Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing Yes Have certificates oftest for machines under 100 kw. been supplied Yes and the results found as per rule Yes Are the lubricating arrangements and the constructionof the generators as per rule Yes Position of Generators Engine room starboard sideYes, is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situatednear unprotected combustible material state distance from same horizontally Yes and vertically Yes, are the generators protected from mechanicalinjury and damage from water, steam and oil Yes, are the bedplates and frames earthed Yes and the prime movers and generators in metalliccontact Yes Switchboards, where are main switchboards placed Engine room starboard sideon aft bulkhead near generatorsare they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steamand oil Yes, if situated near unprotected combustible material state distance from same horizontally Yes and vertically Yes, what insulationmaterial is used for the panels Slate, if of synthetic insulating material is it an Approved Type Yes, if ofsemi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule Yes Is the frame effectually earthed YesIs the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fusesto pilot and earth lamps, voltmeters, etc. Yes locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead"side of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches Double poledouble throw knife switch, and double pole fuse for eachgenerator.and for each outgoing circuit Double pole knife switch and double polefuseAre compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard Twoammeters Two voltmeters Two synchronising devices Two For compound machines in parallel is the ammeter connected on the pole opposite to theequaliser connection Yes Earth Testing, state means provided 2 lamps coupled to 2 through circuit

12801

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled as per Rule Yes, are the reversed current protection devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions Yes. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes. Cables, are they insulated and protected as per the appropriate Tables of the Rules Yes, if otherwise than as per Rule are they of an approved type Yes, state maximum fall of pressure between bus bars and any point under maximum load 5.30 lbs, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends Yes with insulating compound Yes or waterproof insulating tape Yes. Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage Yes, are cables laid under machines or floorplates Yes, if so, are they adequately protected Yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit Yes. State how the cables are supported and protected L.C.A.B. cables clipped to surface in machinery spaces; L.C.A.B. cables clipped to plate in fwd. Tunnels and run in galvanised pipe on deck to mainmast; L.C.A.B. cables clipped to surface on wood frames in engine. Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes. Refrigerated chambers, are the cables and fittings as per Rule Yes. Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yes, where unarmoured cables pass through beams, etc., are the holes effectively bushed Yes and with what material Lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. Emergency Supply, state position Yes and method of control Yes. Navigation Lamps, are they separately wired Yes controlled by separate double pole switches Yes and fuses Yes. Are the switches and fuses in a position accessible only to the officers on watch Yes, is an automatic indicator fitted Yes. Secondary Batteries, are they constructed and fitted as per Rule Yes, are they adequately ventilated Yes. Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present Yes, if so, how are they protected Wagon. Searchlight fittings bolted in apertures in bunker side, all cables outside bunker and where are the controlling switches fitted Engine room, are all fittings suitably ventilated Yes. are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of Yes, whether fixed or portable Yes, are their fittings as per Rule Yes. Heating and Cooking, is the general construction as per Rule Yes. are the frames effectually earthed Yes, are heaters in the accommodation of the convection type Yes. Motors, are all motors constructed and installed as per Rule Yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil Yes, if situated near unprotected combustible material state minimum distance from same horizontally Yes and vertically Yes. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing Yes. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule Yes. Control Gear and Resistances, are they constructed and fitted as per Rule Yes. Lighting Conductors, where required are they fitted as per Rule Yes. Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with Yes, are all fuses of the 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 flameproof type Yes. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule Yes, are they suitably stored in dry situations Yes. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory 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.	Flash Point of Fuel.
MAIN	1	12	110	109	850	Single exp. steam engine		
Auxiliary	1	5	110	45.5	1000	Single exp. diesel engine	Fuel Oil	Above 150°F
EMERGENCY						engine		
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rele.			
MAIN GENERATOR	12	1	37/0.064	109	130	36	V.I.R.	L.C.A.B.
" " EQUALISER								
Auxiliary Generator	5	1	19/0.064	45.5	53	52	V.I.R.	L.C.A.B.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS							
Provisioning S.B. fwd.	1	19/0.064	42.4	53	160	V.I.R.	L.C.A.B.
Provisioning S.B. aft.	1	7/0.036	13.7	24	188	V.I.R.	L.C.A.B.
Engine Room S.B.	1	7/0.036	13.3	24	148	V.I.R.	L.C.A.B.
4/ps. 2/ps. S.B.	1	7/0.036	16.4	24	2	V.I.R.	L.C.A.B.

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/0.064	20	46	374	V.I.R.	L.C.A.B.
NAVIGATION LIGHTS	1	7/0.036	7	24	440	V.I.R.	L.C.A.B.
LIGHTING AND HEATING							
Crew Accom. S.B.	1	7/0.036	10.3	24	328	V.I.R.	L.C.A.B.
Aft. Fans & Floodlights S.B.	1	7/0.064	25.1	31	160	V.I.R.	L.C.A.B.
Fwd. Fans & Floodlights S.B.	1	7/0.064	31.6	46	224	V.I.R.	L.C.A.B.
Engine & Boiler Room S.B.	1	7/0.036	21.5	24	8	V.I.R.	L.C.A.B.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Refrig. Mfr.	2	221	1	7/0.036	1749	24	150	V.I.R. L.C.A.B.

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
The foregoing is a correct description.

RICHARD PICKERSGILL & SONS, LTD.

Electrical Engineers.

Date 24 MAY 1940

COMPASSES.

Minimum distance between electric generators or motors and standard compass 44 feet

Minimum distance between electric generators or motors and steering compass 44 feet

The nearest cables to the compasses are as follows:—

A cable carrying 14 Ampères on the feet from standard compass 7 feet from steering compass.

A cable carrying 14 Ampères 7 feet from standard compass on the 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 1/2 degrees on Every course in the case of the standard compass, and 1/2 degrees on Every course in the case of the steering compass.

SMITH'S DOCK COMPANY, LTD.

Builder's Signature.

Date 27th May 1940

Is this installation a duplicate of a previous case. Yes If so, state name of vessel S.S. "Kerman Prince"

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.) The electrical equipment of this vessel has been installed under special survey, in accordance with approved plans and the remaining requirements of the 1939/39 Rules for Electrical Equipment. The materials used and the workmanship are good. On completion the equipment was operated under working conditions, the governing, regulation and compounding of the generating sets were tested, the insulation resistance of all circuits was measured and the spare gear was examined. This equipment is in my opinion suitable for a classed vessel.

Noted
L.P.
10/6/40.

Total Capacity of Generators 17 Kilowatts.

The amount of Fee ... £ 16 : - : When applied for, 4-6-1940.

Travelling Expenses (if any) £ : : When received, 20 August 1940 R.R. 5/8

Gautier

Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 11 JUN 1940

Assigned See Ind 76 16850