

Mad Rpt No. 11128.

Rpt. 4.

REPORT ON MACHINERY.

No. 28100

Received at London Office

FRI 24 JUN 1921
TUE 18 OCT 1921

Date of writing Report 21-6-21 When handed in at Local Office 22-6-21 Port of SUNDERLAND
No. in Survey held at SUNDERLAND. Date, First Survey 3rd Dec 1919. Last Survey 1st June 1921
Reg. Book. on the S.S. CASTILIAN PRINCE "TUNISIANA" (Number of Visits 42)

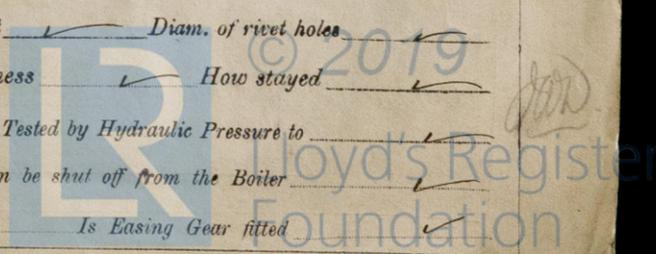
Master Built at Middlesbrough By whom built Turness I. B. & Co. Ltd (S.S. No 24) When built 1921
Engines made at Sunderland By whom made Richardsons Westgarth & Co. Ltd (No 2159) when made 1921
Boilers made at do By whom made do do do when made 1921
Registered Horse Power Owners Port belonging to
Nom. Horse Power as per Section 28 538 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 26", 43", 43" Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft as per rule 14.7 1/2 Material of Iron
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
in the propeller boss Yes If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part
between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two
liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5-2 1/4
Dia. of Tunnel shaft as per rule 13-06" Dia. of Crank shaft journals as per rule 13-7" Dia. of Crank pin 14 1/2 Size of Crank webs 2 1/2 x 9 Dia. of thrust shaft under
collars 14 1/4 Dia. of screw 14-9 Pitch of Screw 18-0 No. of Blades 4 State whether moveable No Total surface 98 sq ft
No. of Feed pumps 2 Diameter of ditto 4 1/2 Stroke 27 Can one be overhauled while the other is at work Yes
No. of Weir " 2 8 x 10 1/2 x 21 4 1/2 Stroke 27 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 27 Can one be overhauled while the other is at work Yes
No. of Donkey Engines 2 Sizes of Pumps 8 x 5 1/2 x 8; 9 x 11 x 10 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 4 @ 3 1/2 In Holds, &c. 2 @ 3 1/2 in Nos 1-2 + 3 holds: 4 @ 3 1/2 in
No. 4 hold: one @ 3 1/2 in No 5 hold (aftermost): Funnel well one @ 2 1/2"
No. of Bilge Injections 1 size 8" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes, 3 1/2
Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line Above
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes
What pipes are carried through the bunkers M13 How are they protected M13
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel John Spencer & Sons, Ltd
Total Heating Surface of Boilers 8166 sq ft Forced Draft fitted Yes No. and Description of Boilers 3 S.E. Cylindrical Multitubular
Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 23-3-21 No. of Certificate 3758
Can each boiler be worked separately Yes Area of fire grate in each boiler 64 sq ft No. and Description of Safety Valves to
each boiler Two, spring loaded Area of each valve 12.54 sq in Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 1-6 Mean dia. of boilers 15-9 Length 12-0 Material of shell plates S
Thickness 1 9/32 Range of tensile strength 28 3/4 to 32 3/4 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams T. R. lap
long. seams T. R., D.B.S. Diameter of rivet holes in long. seams 1 9/32 Pitch of rivets 8 3/32 Lap of plates or width of butt straps 1-6 1/4
Per centages of strength of longitudinal joint rivets 85-6 Working pressure of shell by rules 188.7 Size of manhole in shell 16 1/2 x 13 1/4
plate 85-35
Size of compensating ring 7 1/4 x 1 9/32 No. and Description of Furnaces in each boiler 3 Dighton Material S Outside diameter 4-13 1/4
Length of plain part top Thickness of plates crown 2 1/2 Description of longitudinal joint weld No. of strengthening rings 4
bottom 3 1/2
Working pressure of furnace by the rules 215 Combustion chamber plates: Material S Thickness: Sides 19 Back 19 Top 19 Bottom 27
Pitch of stays to ditto: Sides 8 1/4 x 7/16 Back 8 3/8 x 8 Top 8 3/8 x 7/16 stays are fitted with nuts or riveted heads Nuts Working pressure by rules 181.2
Material of stays S Area at smallest part 1.73 sq in Area supported by each stay 67 sq in Working pressure by rules 206 End plates in steam space:
Material S Thickness 1 5/8 Pitch of stays 16 x 19 1/8 How are stays secured D.N. & W. Working pressure by rules 184 Material of stays S
Area at smallest part 6.1 sq in Area supported by each stay 318 sq in Working pressure by rules 200 Material of Front plates at bottom S
Thickness 7/8 Material of Lower back plate S Thickness 1 3/16 Greatest pitch of stays 13 1/2 x 8 Working pressure of plate by rules 185
Diameter of tubes 2 1/2 Pitch of tubes 3 3/4 x 3 1/16 Material of tube plates S Thickness: Front 1 5/16 Back 3/4 Mean pitch of stays 9 5/16
Pitch across wide water spaces 13 1/2 Working pressures by rules 185 Girders to Chamber tops: Material S Depth and
thickness of girder at centre 9 x 1 1/2 Length as per rule 2-6 25/32 Distance apart 8 3/4 Number and pitch of stays in each 3 @ 7 1/2
Working pressure by rules 216 Steam dome: description of joint to shell % of strength of joint

SUPERHEATER. Type None Date of Approval of Plan Tested by Hydraulic Pressure to
Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

W154-0122



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two connecting rod top and bottom end bolts and nuts; two main bearing bolts and nuts; one set of coupling bolts and nuts; one set of feed and bilge pump valves; bolts, nuts, and iron of various sizes; one propeller shaft; one propeller.

The foregoing is a correct description, FOR RICHARDSONS, WESTGARTH & CO., LTD

Richard St. Russell, ASSISTANT MANAGER, Manufacturer.

Dates of Survey while building: During progress of work in shops, During erection on board vessel, Total No. of visits.

Dates of Examination of principal parts—Cylinders, Slides, Covers, Pistons, Connecting rods, Crank shaft, Thrust shaft, Tunnel shafts, Screw shaft, Propeller, Stern tube, Steam pipes, Engines holding down bolts, Completion of pumping arrangements, Boilers fixed, Engines tried under steam, Completion of fitting sea connections, Stern tube, Screw shaft and propeller, Main boiler safety valves adjusted, Thickness of adjusting washers, Material of Crank shaft, Identification Mark on Do. 6203A, Material of Thrust shaft, Identification Mark on Do. 2159 E.W.R., Material of Tunnel shafts, Identification Marks on Do. 5593N, W.C., Material of Screw shafts, Identification Marks on Do. 6262 E.W.R., Material of Steam Pipes, Lap welded steel, Test pressure 540 lbs.

Is an installation fitted for burning oil fuel? Yes. Is the flash point of the oil to be used over 150°F? Yes. Have the requirements of Section 49 of the Rules been complied with? Yes, as approved. Is this machinery duplicate of a previous case? Yes. If so, state name of vessel: S.S. Lancastrian Prince, (Old report No. 28066)

General Remarks (State quality of workmanship, opinions as to class, &c.) The Machinery has been built and installed under Special Survey. The Materials and Workmanship are good. The vessel has returned to the Builders' yard for completion. To complete the survey, the Hold and Tunnel pumping connections, the Electric light installation, and the deck controls for discharge valves on settling tanks to be examined (Middlesboro' Surveyors advised).

Upon completion of survey this vessel's Machinery is eligible in my opinion for Classification, and the record * LMC with date

The survey on the machinery is now complete with the exception that the Electric Light installation requires to be examined under full working conditions

The machinery of this vessel is eligible in my opinion to have the notation of * LMC-10-21 subject to the Electric Light being examined under full working conditions. It is stated this will be done before the vessel leaves this port, in the meantime she is laid up.

This vessel is fitted with Electric Light and Wireless

The amount of Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses (if any)

Ed. W. Rutter, Wm Morrison, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. OCT. 28 1921

Assigned

MACHINERY CERT. WRITTEN

UNDERLAND.

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.



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