

REPORT ON MACHINERY.

No. 25699

Port of GlasgowReceived at London Office WED. 4 SEP. 1907No. in Survey held at ClydebankDate, first Survey 1st September 07 Last Survey 23rd August 1907

Reg. Book.

(Number of Visits 150)

on the

Q.S.T.S. "Lusitania"

Master

Built at Clydebank By whom built John Brown & Co. Ltd.

Gross

Tons

Net

When built 1907

Engines made at

ClydebankBy whom made John Brown & Co. Ltd.when made 1907

Boilers made at

ClydebankBy whom made John Brown & Co. Ltd.when made 1907

Registered Horse Power

Owners The Cunard Steam Ship Coy. Ltd.Port belonging to LiverpoolNom. Horse Power as per Section 28 12562Is Refrigerating Machinery fitted for cargo purposes noIs Electric Light fitted yesENGINES, &c. — Description of Engines Vertical (4 shafts)No. of Cylinders 4 2 2 No. of Cranks ✓

Dia. of Cylinders

HP 8-5 1/2 10-0 1/2Dia. of Rotors HP 8-0Revs. per minute 188

Dia. of Screw shaft

as per rule

Material of

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 yesIf the liner is in more than one length are the joints burned 1 length

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 12' 0"

Dia. of Tunnel shaft

as fitted 20" pitch

Dia. of Crank shaft journals

as fitted HP 27 1/2

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

collars 2 1/4"

Dia. of screw

Pitch of Screw

No. of Blades 3State whether moveable yes

Total surface

✓No. of Feed pumps 6"Diameter of ditto 13 1/2"Stroke 30"Can one be overhauled while the other is at work yesNo. of Bilge pumps 4Diameter of ditto 10"Stroke 21"Can one be overhauled while the other is at work yesNo. of Donkey Engines 54 in allSizes of Pumps see list appended

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room see list (4" 7 1/2")In Holds, &c. see list (4" 7 1/2")No. of Bilge Injections 2sizes 2 1/2"Connected to condenser, or to circulating pump pumpIs a separate Donkey Suction fitted in Engine room & size yes 4"Are all the bilge suction pipes fitted with roses yesAre the roses in Engine room always accessible yesAre the sluices on Engine room bulkheads always accessible yesAre all connections with the sea direct on the skin of the ship yesAre they Valves or Cocks bothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yesAre the Discharge Pipes above or below the deep water line belowAre they each fitted with a Discharge Valve always accessible on the plating of the vessel yesAre the Blow Off Cocks fitted with a spigot and brass covering plate yesWhat pipes are carried through the bunkers bilge 1 barrel 1 foot of 11" Boiler RoomHow are they protected under ceilingAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesDates of examination of completion of fitting of Sea Connections 6/6/06of Stern Tube 6/6/06Screw shaft and Propeller 6/6/06Is the Screw Shaft Tunnel watertight yesIs it fitted with watertight doors yesworked from BridgeOILERS, &c. — (Letter for record ✓)Manufacturers of Steel D. Colville & Co.Total Heating Surface of Boilers 158238Is Forced Draft fitted yesNo. and Description of Boilers 25 Double & 2 single endedWorking Pressure 195 lbsTested by hydraulic pressure to 390Date of test see list attachedCan each boiler be worked separately yesArea of fire grate in each boiler DE 168.6 SE 84.3

No. and Description of Safety Valves to

each boiler DE 4 SE 2 springArea of each valve 11.04"Pressure to which they are adjusted 200 lbsAre they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 7 1/2"Mean dia. of boilers 17-6"Length SE 11-4"Material of shell plates steelThickness 1 3/8"Range of tensile strength 35 to 38 tonsAre the shell plates welded or flanged noDescrip. of riveting: cir. seams 2 1/2 laping. seams double buttDiameter of rivet holes in long. seams 1 1/2"Pitch of rivets 9 3/8"Lap of plates or width of butt straps 2 1/2"

Percentage of strength of longitudinal joint

rivets 92.7Working pressure of shell by rules 235 lbsSize of compensating ring 32 1/2 27"No. and Description of Furnaces in each boiler DE 87 SE 43Material steelOutside diameter 49 3/16"Length of plain part top 21"Thickness of plates bottom 32"Description of longitudinal joint weldedNo. of strengthening rings ✓Working pressure of furnace by the rules 225 lbsCombustion chamber plates: Material steelThickness: Sides 9/16"Pitch of stays to ditto: Sides 7 1/2" x 8"Back 9 1/4" x 7 1/4"Top 7 1/2" x 8 1/4"If stays are fitted with nuts or riveted heads nutsWorking pressure by rules 195.202Material of stays steelDiameter at smallest part 1-62 1/16"Area supported by each stay 62 7/8"Working pressure by rules 217.210End plates in steam space: 35-4"Material steelThickness 3 1/2"Pitch of stays 17 x 17"How are stays secured 2 1/2" to 1 1/2"Working pressure by rules 196Material of stays steelDiameter at smallest part 5-1/16"Area supported by each stay 287"Working pressure by rules 229Material of Front plates at bottom steelThickness 28 1/2 30 1/16"Greatest pitch of stays 13 3/4"Working pressure of plate by rules 207.51Diameter of tubes 2 1/2"Pitch of tubes 3 3/4"Material of tube plates steelThickness: Front 3/8"Back 3/4"Mean pitch of stays 9.375"Pitch across wide water spaces 10 1/2"Working pressure by rules 335 lbsGirders to Chamber tops: Material steel

Depth and

Thickness of girder at centre 8 3/8" x 4 1/2"Length as per rule 30"Distance apart 8 1/4"Number and pitch of stays in each (3) 7 1/2"Working pressure by rules 212

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Lloyd's Register

Foundation

W844-0023 1/4

4,000-6-02-T. W844-0023 3/4

List of Steam Driven Pumps

Purpose and Type	No off	Dia of Steam Cyl	Dia of Pump Cyl	Length of Stroke
Bilge Pumps	4	8"	10"	21"
Ballast Pumps (duplex)	2	8"	10"	10"
Sanitary Pumps (duplex)	2	10"	10"	10"
Wash Deck & Fire pump (duplex)	1	10"	10"	10"
Hotwell Pumps	4	12½"	14½"	30"
Main Feed Pumps (double cyl)	6	18"	13½"	30"
Assistant Feed & Ash Ejector Pumps (duplex)	4	14"	10"	14"
Main Air Pumps (double cyl)	4	14"	40"	24"
Dry Air Pumps (Twin)	4	7"	24"	7"
Auxiliary Air Pumps (Single cyl)	2	10"	22"	12"
Condensed Water Pumps (duplex)	1	6"	6"	6"
Fresh Water Pumps (duplex)	1	6"	6"	6"
Water Service Pumps (duplex)	2	7½"	10"	12"
Gland & Jacket Drain Tank Pump (duplex)	1	4½"	5"	5"
Steam Lub Water Service Pump (duplex)	1	6"	7"	7"
Distiller Circulating Pumps (duplex)	2	8"	9"	8"
Evaporator Feed Pumps (duplex)	2	5"	5"	6"
Evaporator Brine Pumps (duplex)	2	4"	4½"	6"
Refrigerator Circulating Pumps (duplex)	2	6"	6"	6"
Refrigerator Brine Pump	1	6"	5¾"	6"
Oil Pumps	6	7"	8½"	15"

— Centrifugal Pumps —

Purpose	No off	Dia of Steam Cyl	Length of Stroke	Dia of Impeller over lips	No of Impellers Per Set
Main Circulating Pumps	2 sets	2 at 18"	10"	42"	4
Auxiliary Circulating Pumps	2	7"	6"	36"	1

Bilge Pumps draw from, Fore Coal bunker well, Head or Chain locker well, Reserve bunker, Port wing No 1 Boiler Room, Starboard wing No 1 Boiler Room, Bilge tank No 1 Boiler Room, Bilge tank No 2 Boiler Room, Port wing No 2 Boiler Room, Starboard wing No 2 Boiler Room, No 3 Boiler Room, Port & Starboard wing & Bilge tank, No 4 Boiler Room Port & Starboard wing & Bilge tank, Pocket drains after end of H.P. Lubrication Room Port & Starboard. Port & Starboard wing H.P. Lubrication Room. Independent Bilge suction, after end of L.P. Lubrication Room, Pocket Drains L.P. Lubrication Room, & after end of L.P. Lubrication Room, Port & Starboard Evaporation Room, Port & Starboard Centre of Condenser Room, Port & Starboard Lunnets, Port & Starboard and after end of Pump Room, Port & Starboard Propeller Room, and from after well.

A. McKenna James Morrison

Tests applied to Turbine casings

	Test Pressure lbs per sq in	Date of Test
Port Forward end astern Turbine	100	9/12/05
Starboard " " " "	100	18/12/05
Port after " " "	195	15/1/06
Starboard after " " "	195	18/1/06
Jacket Port aft " "	40	15/1/06
" St ^d " " "	40	18/1/06
H.P. Port, forward end	260	8/2/06
H.P. " After "	130	15/2/06
H.P. Starboard, forward end	260	12/4/06
H.P. " After "	130	3/5/06
L.P. Port,	30	11/9/06
L.P. Starboard,	30	10/10/06

Dates of tests of Steam pipes, Stop Valves and Branch pipes.

1906 May 8, 11, 15, 22, 25, June 12, 13, 22, July 9, 25, 27, 31, Aug 1, 8, 10, 31, Sep 7, 14, 19, 25, Oct 1, 10, 11, 17, 19, 23, 25, Nov 1, 5, 8, 13, 16, 21, 23, 27, Dec 4, 6, 12, 13, 14, 18, 21, 24, 28.

1907 Jan 8, 11, 16, 21, 25, 30, Feb 5, 19, March 2 April 20, 24, May 3, 7, 13, 16.

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A. M. Keane and James Hollison