

REPORT ON MACHINERY.

No. 68753

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Date of writing Report 23rd Dec. 1912 When handed in at Local Office 24 DEC 1912 Port of LIVERPOOL

No. in Survey held at Garston & Wittenhead Date, First Survey 5 Oct Last Survey 16th Dec. 1912
Reg. Book. 64 on the Machinery of the STEEL S.S. "SILVER QUEEN" (Number of Visits 10)

Master Built at Garston By whom built H.B. Grayson, Esq. Tons } Gross
When built 1912 } Net

Engines made at Newbury By whom made Planty & Sons, Esq. when made 1912

Boilers made at none By whom made none when made none

Registered Horse Power 90 Owners Buchanan's Flour Mills Port belonging to Liverpool
Nom. Horse Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted see note

ENGINES, &c.—Description of Engines Two cycle, horizontal oil engine No. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders 3.35" (13 3/16) Length of Stroke 350" (13 3/4) Revs. per minute 300 Dia. of Screw shaft as per rule 4.5" Material of screw shaft as fitted 4 7/8" steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liner Is the after end of the liner made water tight
the propeller boss 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 1'-6"

Dia. of Tunnel shaft as per rule 4.18" Dia. of Crank shaft journals as per rule 4 17/32" Dia. of Crank pin 4 23/32" Size of Crank webs 6 5/16" x 2 3/4" Dia. of thrust shaft under
rollers 3 1/2" Dia. of screw 3'-10" Pitch of Screw 3'-1 1/2" No. of Blades 4 State whether moceable no Total surface 8 sq ft

No. of Feed pumps one Diameter of ditto 2 1/2" Stroke 1 3/4" Can one be overhauled while the other is at work
No. of Bilge pumps one Diameter of ditto 2 1/2" Stroke 1 3/4" Can one be overhauled while the other is at work

No. of Donkey Engines none Sizes of Pumps none No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room 1 @ 2" In Holds, &c. hold 1 @ 2" aft of bulk 1 @ 2"

No. of Bilge Injections none sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size no!

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 none

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves
Are they fixed sufficiently high on the ship's side to be seen without lifting the ER 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
What pipes are carried through the bunkers How are they protected

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

Dates of examination of completion of fitting of Sea Connections 4-11-12 of Stern Tube 12-10-12 Screw shaft and Propeller 12-10-12
The Screw Shaft Tunnel watertight none Is it fitted with a watertight door worked from

WELDS, &c.—(Letter for record) Manufacturers of Steel

Working Surface of Boilers Is Forced Draft fitted No. and Description of Boilers
Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to
boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Greatest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
Percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
Thickness of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
Working pressure by rules 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
holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

W82-0132



VERTICAL DONKEY BOILER— Manufacturers of Steel.

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1912. Oct 5, 12, 14, 28, 31. Nov 4, 7, 19. Dec 16.
 { During erection on board vessel - - - }
 Total No. of visits 10

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders _____ Slides _____ Covers _____ Pistons _____ Rods _____

Connecting rods _____ Crank shaft _____ Thrust shaft _____ Tunnel shafts _____ Screw shaft _____ Propeller _____

Stern tube _____ Steam pipes tested _____ Engine and boiler seatings 12-10-12 Engines holding down bolts 28-10-12

Completion of pumping arrangements 19-11-12 Boilers fixed Engines tried under steam 19-11-12

Main boiler safety valves adjusted Thickness of adjusting washers _____

Material of Crank shaft _____ Identification Mark on Do. _____ Material of Thrust shaft _____ Identification Mark on Do. _____

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts _____ Identification Marks on Do. _____

Material of Steam Pipes _____ Test pressure _____

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

These engines have been fitted on board at this port. The fuel tank was tested in position and found tight, a galvanized steel tray has been fitted under this tank. All engine fittings in accord with Rules. Two fire extinguishers have been placed on board. The engines were examined under full working conditions and found satisfactory, and in my opinion, are eligible for certification of + LMC 12, 12.

A speed of 6.1 knots per hour was obtained at 280 revolutions per minute. The slowest number of revolutions = 150 per minute.

Note:— In order to obtain a greater engine efficiency the Owners intend changing the propeller at an early date. It is also proposed to fit the vessel with electric lighting plant; when this has been done a report will be forwarded.

It is submitted that this vessel is eligible for THE RECORD + LMC 12, 12. (Annual Survey)

Oil engines. 2 Cy 13³/₁₆" - 13¹³/₁₆"
 2 SC. SA. Plenty & Son Ld. Newbury.
 James Cunningham, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee .. £ _____ When applied for, _____

Special .. £ _____

Donkey Boiler Fee .. £ _____ When received, _____

Travelling Expenses (if any) £ _____

Committee's Minute

LIVERPOOL. 24 DEC 1912

Assigned

L M C 12:12



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Messrs. Hartley & Co. Ltd., Newbury.

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