

Rpt. 4.

## REPORT ON MACHINERY.

No. 68753

FRI. DEC. 27. 1912

Date of writing Report 23<sup>rd</sup> Dec. 1912 When handed in at Local Office 24 DEC 1912 Port of LIVERPOOLNo. in Survey held at Garston & Wittenburg Date, First Survey 5 Oct Last Survey 16<sup>th</sup> 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  
Engines made at Newbury By whom made Plimley & Sons, Esq. when made 1912 Tons } Net

Boilers made at none By whom made when made

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

Dia. of Cylinders 33 1/2" (13 3/4") Length of Stroke 350" (13 3/4") Revs. per minute 300 Dia. of Screw shaft as per rule 4 1/2" Material of screw shaft as fitted 4 1/2" 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 1/2" Dia. of Crank shaft journals as per rule 4 1/2" Dia. of Crank pin 4 1/2" Size of Crank webs 6 5/8" 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 moveable no Total surface 8 1/2

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, &amp;c. hold 1 @ 2" after 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 &amp; 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 stowage 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

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door worked from

VALVES, &amp;c.—(Letter for record) Manufacturers of Steel

Total Heating 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

Least 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 - -  
 During erection on board vessel - - -  
 Total No. of visits

1912. Oct 5. 12. 14. 28. 31. Nov 4. 7. 19. Dec 16.

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 notification of LMC 12, 12.

A speed of 6.1 knots per hour was obtained at 280 revolutions per minute. The lowest 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) MONITOR CERTIFICATE

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

Oil engines.

2 Cy 13 3/16 - 13 3/16

2 SC. SA.

Plenty & Son Ltd. Newbury.

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

LIVERPOOL. 24 DEC 1912

L M C 12:12



© 2019

Lloyd's Register Foundation

Messrs. Hartley & Son Ltd., Newbury.

Certificate (if required) to be sent to the Surveyors and to be kept on or below the space for Committee's Minute.