

REPORT ON MACHINERY.

No. 29493

Received at London Office WED. 16 NOV 1910

Date of writing Report 10 When handed in at Local Office 12/11/10 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 10th March 10 Last Survey Nov. 8th 1910

Reg. Book. on the S/S "COCONADA" (Number of Visits 65.)

Master Built at Whiteinch By whom built Barclay Curle & Co. Ltd. Tons Gross 3958. Net 2162.

Engines made at Glasgow By whom made Barclay Curle & Co. Ltd. when made 1910

Boilers made at Glasgow By whom made Barclay Curle & Co. Ltd. when made 1910

Registered Horse Power Owners British India Steam Navigation Co. Ltd. Port belonging to Glasgow

Nom. Horse Power as per Section 28 573 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Twin triple expansion No. of Cylinders 6 No. of Cranks 6

Dia. of Cylinders 18" 30" 52" Length of Stroke 3'-6" Revs. per minute 100 Dia. of Screw shaft as per rule 11.48" Material of steel as fitted 11.34" screw shaft

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 4'-3"

Dia. of Tunnel shaft as per rule 10.51" Dia. of Crank shaft journals as per rule 11.03" Dia. of Crank pin 11.4" Size of Crank webs 7 1/2 x 15 1/4 Dia. of thrust shaft under collars 11 1/4" Dia. of screw 13'-6" Pitch of Screw 18'-3" No. of Blades 3 State whether moveable yes Total surface 48.1 sq ft

No. of Feed pumps 4 Diameter of ditto 4" Stroke 21" Can one be overhauled while the other is at work yes

No. of Bilge pumps 4 Diameter of ditto 4" Stroke 21" Can one be overhauled while the other is at work yes

No. of Donkey Engines 8 Sizes of Pumps 2" x 24" 1" x 10" 1" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2 @ 3 1/2" + in Boiler Room 2 @ 3 1/2" In Holds, &c. No. 1 2 @ 3 1/2", No. 2 2 @ 3 1/2", For 1 Bunker 2 @ 3 1/2", Deep Tank 2 @ 3 1/2", No. 3 Hold 2 @ 2 1/2", Tunnel well 1 @ 2 1/2"

No. of Bilge Injections 2 sizes 7" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 1 @ 4"

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 below

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 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 19-9-10 of Stern Tube 19-9-10 Screw shaft and Propeller 19-9-10

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Cyl. Platform

BOILERS, &c.—(Letter for record) Manufacturers of Steel Stuart & Lloyd, Colvilles, The Lanarkshire Steel Co.

Total Heating Surface of Boilers 8616 sq ft Is Forced Draft fitted yes No. and Description of Boilers 3 Single Ended

Working Pressure 215 Tested by hydraulic pressure to 430 Date of test 26-8-10 + 9-9-10 No. of Certificate 10550 + 10580

Can each boiler be worked separately yes Area of fire grate in each boiler 71.5 sq ft No. and Description of Safety Valves to each boiler double spring loaded Area of each valve 9.62 sq ft Pressure to which they are adjusted 220 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 15'-9" Length 11'-9" Material of shell plates steel

Thickness 1 5/8" Range of tensile strength 30/34 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams T.R. Lap long. seams J.R. & D.S. Diameter of rivet holes in long. seams 1 5/8" Pitch of rivets 10 3/32" Lap of plates or width of butt straps 23"

Per centages of strength of longitudinal joint rivets 94.7 plate 84 Working pressure of shell by rules 251 Size of manhole in shell 17" x 13"

Size of compensating ring 9 1/2" x 1 5/8" No. and Description of Furnaces in each boiler 4 horizontal corrugated Material steel Outside diameter 3'-7 1/4"

Length of plain part top bottom Thickness of plates crown bottom 5/8" Description of longitudinal joint weld No. of strengthening rings 15

Working pressure of furnace by the rules 233 Combustion chamber plates: Material steel Thickness: Sides 3/32" Back 2 1/32" Top 2 1/32" Bottom 1 5/16"

Pitch of stays to ditto: Sides 7 3/8" x 8 1/4" Back 8 1/2" x 7 1/4" Top 8 1/2" x 7 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 225

Material of stays steel Area at smallest part 1.73 sq ft Area supported by each stay 63.98 Working pressure by rules 216 End plates in steam space: Material steel Thickness 1 3/32" Pitch of stays 19 1/2" x 1 5/4" How are stays secured J nuts Working pressure by rules 217 Material of stays steel

Area at smallest part 7.24 Area supported by each stay 297.37 Working pressure by rules 253 Material of Front plates at bottom steel

Thickness 1 3/16" Material of Lower back plate steel Thickness 2 9/32" Greatest pitch of stays 14" x 7 3/4" Working pressure of plate by rules 222

Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 5/8" Material of tube plates steel Thickness: Front 3/32" Back 1/16" Mean pitch of stays abt. 7 1/2"

Pitch across wide water spaces 13 1/2" Working pressures by rules 224 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 10" x 2 @ 3/4" Length as per rule 32 Distance apart 8 1/2" Number and pitch of stays in each 3 @ 7 3/4"

Working pressure by rules 252 Superheater or Steam chest; how connected to boiler none 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

Manufacturers of Steel

Made at _____ By whom made _____

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

[illegible]

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:— 2 connecting rod top end bolts & nuts, 2 connecting rod bottom end bolts & nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set feed & bilge pump valves, 1 set of piston springs, a quantity of assorted bolts & nuts & iron of various sizes.

The foregoing is a correct description,

FOR BARCLAY, CURLE & CO., LTD.

Manufacturer.

Dates of Survey while building	During progress of work in shops - - During erection on board vessel - - Total No. of visits	1910. March 10. 18. 21. Apr. 1. 2. 4. 6. 7. 12. 19. 21. 22. 25. 27. May 2. 3. 6. 7. 9. 11. 12. 23. 24. June 9. 16. 27. July 1. 2. 5. 11. 13. 28. Aug. 4. 5. 11. 17. 19. 22. 24. 25. 26. Sept 2. 3. 5. 6. 9. 12. 13. 17. 19. 20. 27. 29. Oct. 3. 7. 10. 12. 18. 20. 24. 27. 28. 29. Nov. 2. 8.	Is the approved plan of main boiler forwarded herewith Rept. No. 2988.
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Dates of Examination of principal parts—Cylinders 5-11-8-10 Slides 11-8-10 Covers 11-8-10 Pistons 5-8-10 Rods 5-8-10

Connecting rods 5-8-10 Crank shaft 13.7-10 Thrust shaft 17-8-10 Tunnel shafts 5, 11+17-8-10 Screw shaft 17-8-10 Propeller 24-8-10

Stern tube 24-8-10 Steam pipes tested 10-10-10 Engine and boiler seatings 19-9-10 Engines holding down bolts 18-10-10

Completion of pumping arrangements 7-10-10 Boilers fixed 18-10-10 Engines tried under steam 8-11-10
 Sigsbee, Port. Sigsbee, Port.

Main boiler safety valves adjusted 20-10-10 Thickness of adjusting washers $\frac{5}{16}$ " PORT $\frac{3}{8}$ "

Material of Crank shaft steel Identification Mark on Do. 484 Material of Thrust shaft steel Identification Mark on Do. 484

Material of Tunnel shafts steel Identification Marks on Do. 484 Material of Screw shafts steel Identification Marks on Do. 484

Material of Steam Pipes Wrot. Iron Test pressure 645

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

The machinery of this vessel has been constructed under special survey in accordance with the rules and approved plans and has been seen working satisfactorily under steam. The materials and workmanship are good. ✓

This machinery is eligible in my opinion to be classed + L. M. C. 11. 10 ✓

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 11.10

F. D.

The amount of Entry Fee £3-0-0 3: : When applied for,

Special £ 48-13-0 £ 48: 13: (14/11/1910

Donkey Boiler Fee £	:	:	When received,
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Travelling Expenses (if any) £ : : 19...

Committee's Minute

GLASGOW

15 NOV. 1910

Assigned

+ L. M. C.

11-10. J. K.

LAUGHING AT THE

WRITTEN, 16/11/10

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

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Foundation