

## REPORT ON MACHINERY.

No. 29106

Received at London Office

THUR. 21 JUL 1910

Date of writing Report 19 When handed in at Local Office 19/7/10 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 30th March/10 Last Survey 15th July 1910  
 Reg. Book. on the S.S. "Kinnaird Head" (Number of Visits 22)  
 Master John Campbell Built at Bowling By whom built Scott & Sons (No 223) Tons Gross 190.07 Net 73.35  
 Engines made at Glasgow By whom made Bauldie Gillespie (No 100) when made 1910  
 Boilers made at Do By whom made A & W. Dalglisk (No 466) when made 1910  
 Registered Horse Power Owners A. S. Henry & J. MacGregor Port belonging to Lark  
 Nom. Horse Power as per Section 28 46 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

## ENGINES, &amp;c.—Description of Engines

Compound

No. of Cylinders 3

No. of Cranks 2

Dia. of Cylinders 14" 30" Length of Stroke 22" Revs. per minute 110 Dia. of Screw shaft as per rule 6.37" Material of screw shaft iron  
 as fitted 6.5"

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 Yes 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 Yes If two

liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 2' 5 1/2"

Dia. of Tunnel shaft as per rule 5.9" Dia. of Crank shaft journals as per rule 6.19" Dia. of Crank pin 6 1/4" Size of Crank webs 12 x 4" Dia. of thrust shaft under

collars 6 1/4" Dia. of screw 7.6" Pitch of Screw 10" 0" No. of Blades 4 State whether moveable No Total surface 33 sq ft

No. of Feed pumps 1 Diameter of ditto 2 3/4" Stroke 11" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 1 Diameter of ditto 2 3/4" Stroke 11" Can one be overhauled while the other is at work Yes

No. of Donkey Engines one Sizes of Pumps 4 1/2" x 3" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2 - 2" & 1 spec 3" In Holds, &c. 2 - 2" for 4"

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes - 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 Yes

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 none How are they protected Yes

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 23.6.10 of Stern Tube 23.6.10 Screw shaft and Propeller 23.6.10

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

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel D. Colville & Sons

Total Heating Surface of Boilers 862 sq ft Is Forced Draft fitted No No. and Description of Boilers one single ended

Working Pressure 125 lbs Tested by hydraulic pressure to 350 lbs Date of test 23.6.10 No. of Certificate 10462

Can each boiler be worked separately Yes Area of fire grate in each boiler 30 sq ft No. and Description of Safety Valves to

each boiler double spring loaded Area of each valve 4 9/16" Pressure to which they are adjusted 150 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" 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

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length 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

Pitch 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



# 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:— 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 of feed and bilge pump valves: a quantity of assorted bolts & nuts: iron of various sizes

The foregoing is a correct description,

Gouldie Gilchrist & Co. per G. E. Jm  
 Manufacturer.

Dates of Survey while building { During progress of work in shops - 1910 Mar 30. Apr 4. 7. 13. 18. 22. 27 May 3. 10. 26. June 4. 9. 21. 27  
 { During erection on board vessel - 28. 30. July 6. 8. 11. 12. 14. 15.  
 Total No. of visits 29

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 4. 6. 10 Slides 31. 6. 10 Covers 31. 6. 10 Pistons 28. 5. 10 Rods 21. 6. 10  
 Connecting rods 10. 5. 10 Crank shaft 21. 6. 10 Thrust shaft 4. 6. 10 Tunnel shafts ✓ Screw shaft 31. 6. 10 Propeller 21. 6. 10  
 Stern tube 21. 6. 10 Steam pipes tested 6. 7. 10 Engine and boiler seatings 22. 6. 10 Engines holding down bolts 8. 7. 10  
 Completion of pumping arrangements 15. 7. 10 Boilers fixed 15. 7. 10 Engines tried under steam 12. 7. 10  
 Main boiler safety valves adjusted 14. 7. 10 Thickness of adjusting washers P. V. 5/16 S. V. 5/16  
 Material of Crank shaft Steel Identification Mark on Do. 100 Material of Thrust shaft Steel Identification Mark on Do. 100  
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts iron Identification Marks on Do. 100  
 Material of Steam Pipes Copper Test pressure 400 lbs per sq in

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

The machinery has been built under special survey: the material and workmanship, and satisfactorily tested under steam

It is submitted that above vessel is eligible for a record of + L. M. C. 7. 10 in the Register Book

It is submitted that this vessel is eligible for THE RECORD + LMC 7.10

The amount of Entry Fee .. £ 1 : 0 : 0  
 Special .. £ 5 : 6 : 8  
 Donkey Boiler Fee .. £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 15/7/10  
 When received, 25.7.10

Committee's Minute

Glasgow

20 JUL 1910

Assigned + LMC 7.10

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



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Glasgow

Certificate (if required) to be sent to

18-7-10.