

Rpt. 4.  
Received from  
Surveyor  
1 JAN. 1902

JAN. 14 JAN 1902 No. 19535

# REPORT ON MACHINERY.

Port of Glasgow

Received at London Office 19

No. in Survey held at Annan Date, first Survey 28<sup>th</sup> Feb. Last Survey 14<sup>th</sup> Dec 1901  
Reg. Book. (Number of Visits 27)

on the S.S. "SEACOMBE" Tons { Gross 588.8  
Net 64.89

Master \_\_\_\_\_ Built at Annan By whom built Cochrane & Co. Annan When built 1901

Engines made at Annan By whom made Cochrane & Co. Annan when made 1901

Boilers made at Annan By whom made Cochrane & Co. Annan when made 1901

Registered Horse Power \_\_\_\_\_ Owners Wallasey Urban District Council belonging to Liverpool

Nom. Horse Power as per Section 28 172 Is Refrigerating Machinery fitted No. Is Electric Light fitted Yes.

**ENGINES, &c.**—Description of Engines Triple expansion, 4 screws No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 13.25" & 34" Length of Stroke 22 1/2" Revs. per minute 144 Dia. of Screw shaft as per rule 6.83 Lgth. of stern bush 2-5 1/2"  
 Dia. of Tunnel shaft as per rule 6.22 Dia. of Crank shaft journals as per rule 6.70 Dia. of Crank pin 4 3/8" Size of Crank webs 5 x 8 1/2" Dia. of thrust shaft under collars 6 3/4" Dia. of screw 7.0" Pitch of screw 9.0" No. of blades 3 State whether moveable no Total surface 16<sup>sq</sup>ft  
 No. of Feed pumps  Diameter of ditto  Stroke  Can one be overhauled while the other is at work   
 No. of Bilge pumps  Diameter of ditto  Stroke  Can one be overhauled while the other is at work   
 No. of Donkey Engines Two Sizes of Pumps Auto. feed 6 x 4 1/2 x 6" Duplex. General 4 x 3 x 5" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Two 2" dia<sup>2</sup> In Holds, &c. Two 2" dia<sup>2</sup> in each forward & after holds, & one 2" in fore peak.  
 No. of bilge injections 1 sizes 8 1/2" 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 Valves & cocks.  
 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 on B.H. 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   
 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  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock before launch Is the screw shaft tunnel watertight none  
 Is it fitted with a watertight door  worked from

**BOILERS, &c.**— (Letter for record (S)) Total Heating Surface of Boilers 3390<sup>sq</sup>ft Is forced draft fitted no  
 No. and Description of Boilers 3 Navy type. Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs  
 Date of test 5/12/01 Can each boiler be worked separately yes Area of fire grate in each boiler 34.4<sup>sq</sup>ft No. and Description of safety valves to each boiler 2 Patent Spring Area of each valve 3.98<sup>sq</sup> Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 2-3" Mean dia. of boilers 8.0" Length 16-6" Material of shell plates steel  
 Thickness 15/16" Range of tensile strength 24 to 32 Are they welded or flanged no Descrip. of riveting: cir. seams double long. seams double  
 Diameter of rivet holes in long. seams 17/32" Pitch of rivets 4 7/8" Lap of plates or width of butt straps 12"  
 Per centages of strength of longitudinal joint: rivets 76.3 plate 75 Working pressure of shell by rules 213 lbs Size of manhole in shell 15 x 11"  
 Size of compensating ring McNeill's No. and Description of Furnaces in each boiler 2 Deighton Material steel Outside diameter 3.0"  
 Length of plain part top } Thickness of plates crown } 3 1/2" Description of longitudinal joint welded No. of strengthening rings   
 bottom } bottom }  
 Working pressure of furnace by the rules 210 lbs Combustion chamber plates: Material steel Thickness: Sides 9/16" Back  Top 9/16" Bottom 9/16"  
 Pitch of stays to ditto: Sides 7 3/4" x 7 1/2" Back  Top 7 3/4" x 7 1/4" stays are fitted with nuts or riveted heads nuts Working pressure by rules 182 lbs  
 Material of stays steel Diameter at smallest part 1.5" Area supported by each stay 60<sup>sq</sup> Working pressure by rules 200 lbs End plates in steam space:  
 Material steel Thickness 1/32" Pitch of stays 20" x 14" How are stays secured nuts Working pressure by rules 182 lbs Material of stays steel  
 Diameter at smallest part 5.56" Area supported by each stay 280<sup>sq</sup> Working pressure by rules 186 lbs Material of Front plates at bottom steel  
 Thickness 1/32" Material of Lower back plate steel Thickness 1/32" Greatest pitch of stays  Working pressure of plate by rules   
 Diameter of tubes 2 1/2" Pitch of tubes 3 1/2" x 3 1/2" Material of tube plates steel Thickness: Front 17/16" Back 1/32" Mean pitch of stays abt 10 1/2"  
 Pitch across wide water spaces none Working pressures by rules  Girders to Chamber tops: Material none 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 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

If not, state whether, and when, one will be sent? In a Report also sent on the Hull of the ship.

[500-13901-Copyable Ink.]

W1584-0211



DONKEY BOILER— No. *None* Description ✓

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

Working pressure ✓ tested by hydraulic pressure to ✓ No. of Certificate ✓ Fire grate area ✓ Description of safety valves ✓

No. of safety valves ✓ Area of each ✓ Pressure to which they are adjusted ✓ 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 ✓ 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 ✓

Thickness of furnace crown plates ✓ Stayed by ✓ Working pressure of shell by rules ✓

Working pressure of furnace by rules ✓ Diameter of uptake ✓ Thickness of uptake plates ✓ Thickness of water tubes ✓

SPARE GEAR. State the articles supplied:— *Two top end & two bottom end connecting rod bolts, two main bearing bolts, one set coupling bolts, one set feed & bilge pump valves. Etc.*

The foregoing is a correct description,

For COCHRAN & CO., ANNAN, LIMITED, Manufacturer.

*J.H. Bell* Director.

Dates of Survey while building { During progress of work in shops - - } 1901. Feb 28, Apr 11, 19, May 6, 21, 28, Jun 7, 14, 21, 27, July 2, 5, 12, Aug 2, 8, 16, Sep 13, 20, 26, Oct 4, 11, 17, 25, Nov 1, 5, 15, 22, 29, Dec 14  
Total No. of visits *29*

Is the approved plan of main boiler forwarded herewith *yes*  
" " " donkey " " " ✓

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

Material of screw shaft *steel* Is the screw shaft fitted with a continuous liner the whole length of the stern tube *no*.  
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 *no*.  
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 *no*.

The Machinery of this vessel has been constructed under Special Survey, the material & workmanship are of good quality, it has been securely fastened on board tried under steam & found satisfactory.

In my opinion it is eligible to be classed in the Register Book with the record of *+ L.M.C. 12.01*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 12.01 Elec. light

*C.M.*  
*14.1.02*

*J.W.D.*  
*14.1.02*

The amount of Entry Fee. . . £ *2* : . . :  
Special . . . . . £ *25* . *16* : . . :  
Donkey Boiler Fee . . . . . £ . . . : . . :  
Travelling Expenses (if any) £ *6* : *12* : . . :  
When applied for, *17/12/1901*  
When received, *11/1/1902*

*J.W. Dimmock*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *Glasgow*, 13 JAN. 1902

Assigned *+ L.M.C. 12.01*



*Surveyor Cochran & Co. Annan do. Annan. Scotland.*

*J.M.*

(The Surveyors are requested not to write on or deface the space for Committee's Minute.)

FOR CERTIFICATE  
WRITTEN 14-1-02