

## REPORT ON MACHINERY.

No. 22273

Received at London Office

MUN. 21 MAR 1910

Date of writing Report 16 Mar 10 When handed in at Local Office 18/3/10 Port of Hull

No. in Survey held at Hull Date, First Survey Nov 11/09 Last Survey Mar 14<sup>th</sup> 1910

Reg. Book. 1 supp on the s/trawler ALBERIA (Number of Visits 35) Gross 318 Tons Net 125

Master Beverley Built at Beverley By whom built Cook Welton & Gemmell When built 1910

Engines made at Hull By whom made C. D. Holmes & Co L<sup>d</sup> when made d<sup>o</sup>

Boilers made at d<sup>o</sup> By whom made d<sup>o</sup> when made d<sup>o</sup>

Registered Horse Power 84 Owners The Crown Steam Fishing Co L<sup>d</sup> Port belonging to Fleetwood

Nom. Horse Power as per Section 28 84 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines inverted triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 13½-23-37 Length of Stroke 26" Revs. per minute 110 Dia. of Screw shaft 7.86 as per rule 7.86 Material of screw shaft iron

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 3'-0"

Dia. of Tunnel shaft 6.96 as per rule 7.5 Dia. of Crank shaft journals 7.3 as per rule 7.3 Dia. of Crank pin 7½" Size of Crank webs 14½x43" Dia. of thrust shaft under collars 7½" Dia. of screw 9-6" Pitch of Screw 11-6" No. of Blades 4 State whether moveable no Total surface 34 ft<sup>2</sup>

No. of Feed pumps 2 Diameter of ditto 2½" Stroke 14¾" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 2½" Stroke 14¾" Can one be overhauled while the other is at work yes

No. of Donkey Engines one Sizes of Pumps 2¾" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps 1-2" suction to forehold & 1-2" suction to main hold. 2" Ejector suction to all holds

In Engine Room one 2" dia & one 2½" to Ejector In Holds, &c. 1-2" suction to forehold & 1-2" suction to main hold. 2" Ejector suction to all holds

No. of Bilge Injections one sizes 3½" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2½" ejector

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 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 hold suction How are they protected by wood casings

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 29/12/09 of Stern Tube 29/12/09 Screw shaft and Propeller 17/12/09

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

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Phoenix A. S. Hoerde Westphalia

Total Heating Surface of Boilers 1400 ft<sup>2</sup> Is Forced Draft fitted no No. and Description of Boilers single ended multitubular

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 24/2/10 No. of Certificate 1732

Can each boiler be worked separately yes Area of fire grate in each boiler 47 ft<sup>2</sup> No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 4.9 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 12" Mean dia. of boilers 13'-10" Length 10'-9" Material of shell plates steel

Thickness 1½" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double lap long. seams double butt Diameter of rivet holes in long. seams 13/16" Pitch of rivets 8" Lap of plates or width of butt straps 18"

Per centages of strength of longitudinal joint 88.6 Working pressure of shell by rules 184 lbs Size of manhole in shell 16"x12"

Size of compensating ring 7"x1½" No. and Description of Furnaces in each boiler 3 plain Material steel Outside diameter 3'-3"

Length of plain part 6'-0" Thickness of plates 3/4" Description of longitudinal joint welded No. of strengthening rings none

Working pressure of furnace by the rules 191 Combustion chamber plates: Material steel Thickness: Sides 7/16" Back 3/32" Top 7/16" Bottom 7/16"

Pitch of stays to ditto: Sides 9½"x9½" Back 9½"x9½" Top 9½"x9½" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 193 lbs

Material of stays steel Diameter at smallest part 1½" Area supported by each stay 92.60" Working pressure by rules 200 lbs End plates in steam space: Material steel Thickness 1½" Pitch of stays 20"x20" How are stays secured double nuts & washers Working pressure by rules 184 Material of stays steel

Diameter at smallest part 3¾" Area supported by each stay 400 D" Working pressure by rules 195 Material of Front plates at bottom steel

Thickness 1" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 14½"x9½" Working pressure of plate by rules 184

Diameter of tubes 3½" Pitch of tubes 5½"x5" Material of tube plates steel Thickness: Front 1" Back 7/8" Mean pitch of stays 10 1/16"

Pitch across wide water spaces 13¾" Working pressures by rules 195 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 10"x2" Length as per rule 3'-3" Distance apart 9½" Number and pitch of stays in each 3-9½"

Working pressure by rules 195 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately yes Diameter 1" Length 1" Thickness of shell plates 1" Material steel Description of longitudinal joint double lap Diam. of rivet 13/16" Pitch of rivets 8" Working pressure of shell by rules 184 Diameter of flue 1" Material of flue plates steel Thickness 1"

Stiffened with rings yes Distance between rings 12" Working pressure by rules 195 End plates: Thickness 1" How stayed by stays

Working pressure of end plates 195 Area of safety valves to superheater 1" Are they fitted with easing gear yes



# 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 top end & 2 bottom end connecting rod bolts & nuts, 2 main bearing bolts & nuts, one set coupling bolts & nuts, one set of feed pump, bilge pump & air pump valves, one main & one donkey feed check valve, assorted bolts & nuts.

The foregoing is a correct description,  
p. pro CHARLES D. HOLMES & CO. LTD.

Manufacturer.

*Charles D. Holmes* DIRECTOR,  
Dates of Survey { During progress of work in shops - 1909 - Nov 11, 15, 22, 25, 30 Dec 3, 7, 13, 14, 21, 22, 29, 30, 31 1910 - Jan 3, 7, 11, 14, 19, 24, 25  
During erection on board vessel - Feb 1, 4, 9, 11, 14, 18, 24, 25, 28 Mar 1, 4, 8, 10, 14.  
Total No. of visits 35

Is the approved plan of main boiler forwarded herewith *yes*

" " " donkey " " " none

Dates of Examination of principal parts—Cylinders 24/1/10 Slides 1/2/10 Covers 19/1/10 Pistons 4/2/10 Rods 22/2/10  
Connecting rods 22/2/09 Crank shaft 11/1/10 Thrust shaft 17/12/09 Tunnel shafts - Screw shaft 17/12/09 Propeller 17/12/09  
Stern tube 17/12/09 Steam pipes tested 4/3/10 Engine and boiler seatings 11/2/10 Engines holding down bolts 1/3/10  
Completion of pumping arrangements 10/3/10 Boilers fixed 4/3/10 Engines tried under steam 10/3/10  
Main boiler safety valves adjusted 10/3/10 Thickness of adjusting washers For 3/8 Aft 5/16  
Material of Crank shaft iron Identification Mark on Do. 632 Material of Thrust shaft steel Identification Mark on Do. 632  
Material of Tunnel shafts - Identification Marks on Do. - Material of Screw shafts iron Identification Marks on Do. 632  
Material of Steam Pipes Solid drawn copper. Test pressure 400 lbs.

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

The machinery & boiler of this vessel have been constructed under Special Survey, the workmanship & material is good; they have been fitted on board in accordance with the requirements of the Rules. They are now in good & safe working condition & eligible, in my opinion, to have record of + LMC 3.10. in the Register Book.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 3.10.

*DRR*

*J.W.D.*  
21/3/10

The amount of Entry Fee .. £ 1 : 0 : 0 When applied for, 17.3 - 1910.  
Special .. £ 12 : 12 : 0  
Donkey Boiler Fee .. £ : : :  
Travelling Expenses (if any) £ 4 : 0 : 0  
13 16.0

When received, 21.3 - 1910.

*John Shaw Heck*

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

Committee's Minute

TUES. 22 MAR 1910

Assigned

+ L.M.C. 3.10

MACHINERY CERTIFICATE  
WRITTEN.



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Foundation