

# REPORT ON MACHINERY

No.

9195

TUES. 1 SEP 1894

Port of *Hull*

No. in Survey held at  
Reg. Book.

*Hull*

Date, first Survey

*Apr. 26<sup>th</sup>*

Last Survey

*Aug. 17<sup>th</sup>*

*18 94*

(Number of Visits *21*)

Unit on the

*Steam Trawler Blackbird*

Tons

*136*

Net *45*

Master Built at *Hull* By whom built *Carters & Lim*

When built *1894*

Engines made at *Hull* By whom made *Carters & Lim*

when made *1894*

Boilers made at *Hull* By whom made *Carters & Lim*

when made *1894*

Registered Horse Power *45* Owners *Pioneer Steam Fishing Co*

Port belonging to *Grimsey*

Nom. Horse Power as per Section 28 *47*

ENGINES, &c.— Description of Engines *Triple Comp. Imm & Acting* No. of Cylinders *Three*  
Diameter of Cylinders *11" 14" 30"* Length of Stroke *21* Revolutions per minute *as per rule 5.307*  
Diameter of Tunnel shaft *as per rule 5.01* Diameter of Crank shaft journals *5 3/8"* Diameter of Crank pin *5 3/8"* Size of Crank webs *6 1/2" 3 1/2" 3 1/2"*  
Diameter of screw *7' 8"* Pitch of screw *9' 3"* No. of blades *4* State whether moveable *No* Total surface *2109 sq ft*  
No. of Feed pumps *One* Diameter of ditto *2 1/4"* Stroke *10* Can one be overhauled while the other is at work *—*  
No. of Bilge pumps *One* Diameter of ditto *3"* Stroke *10* Can one be overhauled while the other is at work *—*  
No. of Donkey Engines *One* Sizes of Pumps *3" x 6"* No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room *One 2"* In Holds, &c. *One 2"*  
*Ejector with suction in Engine Bilge & flush well and discharge on deck*  
No. of bilge injections *one sizes 3 1/2"* Connected to condenser, or to circulating pump *pumps* Is a separate donkey suction fitted in Engine room & size *No. 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 *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 *Suction to forward* How are they protected *wood cased*  
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 *and new* Is the screw shaft tunnel watertight *In tunnel*  
Is it fitted with a watertight door *—* worked from *—*

BOILERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *800 sq ft*  
No. and Description of Boilers *One Cylindrical Small* Working Pressure *160 lb* Tested by hydraulic pressure to *320 lb*  
Date of test *23/9/94* Can each boiler be worked separately *—* Area of fire grate in each boiler *28 sq ft* No. and Description of safety valves to  
each boiler *Two Spring loaded* Area of each valve *3.14 sq ft* Pressure to which they are adjusted *165* Are they fitted  
with easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *9"* Mean diameter of boilers *10' 0"*  
Length *9' 6"* Material of shell plates *Steel* Thickness *2 7/32"* Description of riveting: circum. seams *all in lap* long. seams *all chop and*  
Diameter of rivet holes in long. seams *1 3/16"* Pitch of rivets *6 7/8"* Lap of plates or width of butt straps *12 1/4"*  
Per centages of strength of longitudinal joint *85%* Working pressure of shell by rules *160 lb* Size of manhole in shell *16" x 12"*  
Size of compensating ring *30" x 28" x 2 7/32"* No. and Description of Furnaces in each boiler *Two Plain* Material *Steel* Outside diameter *35"*  
Length of plain part *top 6' 0"* Thickness of plates *bottom 4 1/16"* Description of longitudinal joint *Welded* No. of strengthening rings *—*  
Working pressure of furnace by the rules *161 lb* Combustion chamber plates: Material *Steel* Thickness: Sides *9 1/16"* Back *9 1/16"* Top *9 1/16"* Bottom *1 1/16"*  
Pitch of stays to ditto: Sides *8"* Back *8 1/4"* Top *8"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *161 lb*  
Material of stays *Steel* Diameter at smallest part *1 3/8"* Area supported by each stay *8 1/4" x 8"* Working pressure by rules *179 lb* End plates in steam space:  
Material *Steel* Thickness *2 9/32"* Pitch of stays *15"* How are stays secured *all nuts* Working pressure by rules *166 lb* Material of stays *Steel*  
Diameter at smallest part *2 1/4"* Area supported by each stay *15" x 14 1/2"* Working pressure by rules *165 lb* Material of Front plates at bottom *Steel*  
Thickness *2 7/32"* Material of Lower back plate *Steel* Thickness *1 3/16"* Greatest pitch of stays *12"* Working pressure of plate by rules *160 lb*  
Diameter of tubes *3 1/4"* Pitch of tubes *14 1/2"* Material of tube plates *Steel* Thickness: Front *2 7/32"* Back *1 10/16"* Mean pitch of stays *9"*  
Pitch across wide water spaces *13 1/4"* Working pressures by rules *166 lb* Girders to Chamber tops: Material *Iron* Depth and  
thickness of girder at centre *6" x 2"* Length as per rule *27"* Distance apart *7 1/2"* Number and pitch of Stays in each *two 8"*  
Working pressure by rules *168 lb* 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

HUL409-0145



## DONKEY BOILER—

Description

*No donkey boiler*

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 \_\_\_\_\_

enter the donkey boiler \_\_\_\_\_ Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_

Description of riveting long. seams \_\_\_\_\_ Diameter of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_

Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ 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 \_\_\_\_\_

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 bolts. Two bottom end bolts. Two main bearing bolts. One set coupling bolts. One set feed pump valve. One set Bilge pump valve. Set escape valve & safety valve spring.*

*The vessel efficient with masts and sails as a drawler*

The foregoing is a correct description,

EARLE'S

Manufacturer.

SHIPBUILDING &amp; ENGINEERING CO. LIMITED

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

*Workmanship good*

*A. S. Leach*  
GENERAL MANAGER & DIRECTOR

*per J.H.V.*

*The Machinery and Boiler of this vessel are now in my opinion in safe working condition. They have been constructed under special survey and placed on board in accordance with the Society's Rules. The case is respectfully submitted for the notification + L.M.C. 8,94 in the Register Book.*

It is submitted that  
this vessel is eligible for  
THE RECORD + L.M.C. 8-94

*W.A.**4-9-94*

Certificate (if required) to be sent to *Hull.*

The amount of Entry Fee.. £ 1 : 0 :

Special .. .. £ 0 : 0 :

Donkey Boiler Fee .. .. £ ✓ :

Travelling Expenses (if any) £ ✓ :

When applied for,

1/9/18-94

When received,

29.10.18-94

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

Committee's Minute

FRIDAY 7 SEP 1894

Assigned

*+ L.M.C. 8,94*

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Foundation