

# REPORT ON MACHINERY.

No. 8654

Port of Hull Received at London Office W.L.O. 14 11N 1893  
 No. in Survey held at Hull Date, first Survey Mar 3<sup>rd</sup> Last Survey Jan. 4<sup>th</sup> 1893  
 Reg. Book. 41mbup on the Steam Trawler Yersush (Number of Visits 10) Tons { Gross 134 Net 47  
 Master          Built at Hull By whom built Carlisle Co. Lim When built 1893  
 Engines made at Hull By whom made Carlisle Co. Lim when made 1893  
 Boilers made at Hull By whom made Carlisle Co. Lim when made 1893  
 Registered Horse Power 45 Owners Pioneer Steam Fishing Co. Port belonging to Grimsby  
 Nom. Horse Power as per Section 28 47

**ENGINES, &c.**— Description of Engines Simple Comp. Inverted & Acting No. of Cylinders Three  
 Diameter of Cylinders 11" 14" 30" Length of Stroke 21 Revolutions per minute 120 Diameter of Screw shaft 5.304  
 Diameter of Tunnel shaft 5.01 Diameter of Crank shaft journals 5 3/8" Diameter of Crank pin 5 3/8" Size of Crank webs 6 1/2 x 3 7/8"  
 Diameter of screw 7.8" Pitch of screw 9.3" No. of blades 4 State whether moveable No Total surface 21 sq ft  
 No. of Feed pumps One Diameter of ditto 2 1/2" 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 2 x 4" duplex No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room One 2" In Holds, &c. One 2" Clackwell one 2"  
5" Gictor with suction in Engine Bilge Clackwell and discharge on deck  
 of bilge injections one sizes 3 3/4" Connected to condenser, or to circulating pump pump Is a separate donkey suction fitted in Engine room & size 3" - Gictor  
 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 Yes  
 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 Nov 1892 Is the screw shaft tunnel watertight No tunnel  
 Is it fitted with a watertight door - worked from -

**BOILERS, &c.**— (Letter for record S) Total Heating Surface of Boilers 800 square ft  
 No. and Description of Boilers One cylindrical Invert Working Pressure 160 lb Tested by hydraulic pressure to 320 lb  
 Date of test 11/5/93 Can each boiler be worked separately - Area of fire grate in each boiler 25 sq ft No. and Description of safety valves to  
 each boiler Two Spring loaded Area of each valve 3.14 sq" Pressure to which they are adjusted 165 lb Are they fitted  
 with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 8" Mean diameter of boilers 10.0"  
 Length 9.6' Material of shell plates Steel Thickness 27/32 Description of riveting: circum. seams double riv lap long. seams double riv lap  
 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 27/32 No. and Description of Furnaces in each boiler Two Plain Material Steel Outside diameter 35"  
 Length of plain part 6.5' Thickness of plates 4/16" Description of longitudinal joint welded No. of strengthening rings None  
 Working pressure of furnace by the rules 161 lb Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 10/16"  
 Pitch of stays to ditto: Sides 8 1/4" Back 8" 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 1/2" x 8" Working pressure by rules 179 lb End plates in steam space:  
 Material Steel Thickness 29/32 Pitch of stays 15" How are stays secured with 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 27/32 Material of Lower back plate Steel Thickness 19/16 Greatest pitch of stays 5" Working pressure of plate by rules 160 lb  
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates Steel Thickness: Front 27/32 Back 27/32 Mean pitch of stays 9"  
 Pitch across wide water spaces 15 1/2" Working pressures by rules 166 lb Girders to Chamber tops: Material Iron Depth and  
 thickness of girder at centre 6" x 15 1/2" abt Length as per rule 25" Distance apart 7 1/2" Number and pitch of Stays in each 2 - 8"  
 Working pressure by rules 191 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         

If not, state whether, and when, one will be sent? In a Report also sent on the Hull of the Ship. Form No. 6. - 1292. - 661

Lloyd's Register Foundation  
 Hull 407-0286

**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 can enter the donkey boiler \_\_\_\_\_

Description of riveting long. seams \_\_\_\_\_ 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 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:— *The top end bolts. Two bottom end bolts, two main bearing bolts, one set Coupling bolts, one set Feed Pump valves, one set Bilge pump valve, set check valve and safety valve spring*

**EARLE'S**

**SHIPBUILDING & ENGINEERING CO. LIMITED**

The foregoing is a correct description,

*A. S. Leaman* Manufacturer.

**GENERAL MANAGER & DIRECTOR.**

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

*The Machinery and Boiler of this Steam Sawber have been constructed under special survey and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition and the case is respectfully submitted for the notification + L.M.C. 6-93. in the Register Book.*

It is submitted that this vessel is eligible for **THE RECORD + L.M.C. 6-93**

*M.A.*  
*14-6-93*

Certificate (if required) to be sent to *The Surveyors Hull*

The amount of Entry Fee. . . £ 1 : 0 :  
Special . . . . . £ 2 : 0 :  
Donkey Boiler Fee . . . . . £ ✓ : :  
Travelling Expenses (if any) £ ✓ : :  
When applied for, 13/6/93  
When received, 25/7/93

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

**MACHINERY CERTIFICATE WRITTEN**

Committee's Minute

**FRI 16 JUN 1893**

Assigned

*+ L.M.C. 6, 93*



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