

REPORT ON MACHINERY.

Port of Hull Received at London Office MUN 4 JUL 1898
 No. in Survey held at Hull Date, first Survey Aug 28/97 Last Survey June 24 1898
 Reg. Book. Starling (Number of Visits 35)
 Supp on the Steel Steam Trawler Tons Gross 181
 Master Starling Net 47 When built 1898
 Built at Hull By whom built Carlis & Lim
 Engines made at Hull By whom made Carlis & Lim when made 1898
 Boilers made at Hull By whom made Carlis & Lim when made 1898
 Registered Horse Power 55 Owners Pioneer & Fishing Co Port belonging to Himley
 Nom. Horse Power as per Section 28 57 Is Electric Light fitted

ENGINES, &c.—Description of Engines Simple Compound No. of Cylinders Three No. of Cranks Three
 Diameter of Cylinders 12' 20' 32' Length of Stroke 23 Revolutions per minute 125 Diameter of Screw shaft 6.62
 Diameter of Tunnel shaft 5.99 as per rule 6.4 Diameter of Crank shaft journals 6 1/2 Diameter of Crank pin 6 1/2 Size of Crank webs 7 1/2 x 4 1/4
 Diameter of screw 8' 2 Pitch of screw 11:0 No. of blades 4 State whether moveable No Total surface 24 29 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 2 1/2 Stroke 10 Can one be overhauled while the other is at work -
 No. of Donkey Engines one Sizes of Pumps 2 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room one 2 In Holds, &c. one 2
Ejector suction in the Engine Bilge & hold and discharge on deck.
 No. of bilge injections one sizes 3 1/2 Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size 4 1/2
 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 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 now Is the screw shaft tunnel watertight in tunnel
 Is it fitted with a watertight door Yes worked from -

OILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 880 29 sq ft Is forced draft fitted No
 No. and Description of Boilers One Cyl & Drum Working Pressure 200 lb Tested by hydraulic pressure to 400 lb
 Date of test 3/3/98 Can each boiler be worked separately Area of fire grate in each boiler 33 9/16 No. and Description of safety valves to
 each boiler two Spring loaded Area of each valve 3.14 1/2 Pressure to which they are adjusted 200 lb Are they fitted
 with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 7 Mean diameter of boilers 11:0
 Length 9:6 Material of shell plates Steel Thickness 1 Description of riveting: circum. seams all air cup long. seams all chip steel
 Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 7 1/2 Lap of plates or width of butt straps 16
 Per centages of strength of longitudinal joint 84.8% Working pressure of shell by rules 200 lb Size of manhole in shell 16' x 12'
 Size of compensating ring 31' diam x 1' No. and Description of Furnaces in each boiler two 700 Material Steel Outside diameter 42
 Length of plain part top 9 1/16 Thickness of plates bottom 9 1/16 Description of longitudinal joint welded No. of strengthening rings crossed
 Working pressure of furnace by the rules 210 lb Combustion chamber plates: Material Steel Thickness: Sides 10 1/16 Back 10 1/16 Top 10 1/16 Bottom 10 1/16
 Pitch of stays to ditto: Sides 0 Back 7 3/4 Top 7 7/8 If stays are fitted with nuts or riveted heads nut Working pressure by rules 211 lb
 Material of stays Steel Diameter at smallest part 1 3/8 Area supported by each stay 8 x 7 3/4 Working pressure by rules 200 lb End plates in steam space:
 Material Steel Thickness 1 1/32 Pitch of stays 15 3/4 How are stays secured all nut Working pressure by rules 206 lb Material of stays Steel
 Diameter at smallest part 29 1/16 Area supported by each stay 15 3/4 x 15 Working pressure by rules 223 lb Material of Front plates at bottom Steel
 Thickness 29 1/32 Material of Lower back plate Steel Thickness 12 1/16 Greatest pitch of stays 12 Working pressure of plate by rules 200 lb
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 Material of tube plates Steel Thickness: Front 29 1/32 Back 12 1/16 Mean pitch of stays 9
 Pitch across wide water spaces 13 1/4 Working pressures by rules 204 lb Girders to Chamber tops: Material Iron Depth and
 thickness of girder at centre 6 x 2 1/2 Length as per rule 27 5/8 Distance apart 7 1/2 Number and pitch of Stays in each two 7 1/2
 Working pressure by rules 200 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



DONKEY BOILER— Description *Two Donkey Boilers*

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 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 bolts. Two bottom end bolts. One main bearing bolt. One set coupling bolt. One set Dead Pump Valve. One set Bridge Pump Valve. One set Check Valve. One Safety Valve Spring.*

The vessel efficient with mast and sail on a trawl.

The foregoing is a correct description,
 Manufacturer. *A. S. Leaton*

Dates of Survey while building: During progress of work in shops _____ During erection on board vessel _____ Total No. of visits *35*

1897: Aug. 28. Sep. 15, 25. Oct. 18, 22, 29. Nov. 5, 26. Dec. 3, 6, 13, /89.

Jan. 2, 20, 27. Feb. 5, 12, 18, 19, 24. Mar. 2, 3, 7, 17, 22, 28. Apr. 4, 18. May 11, 16. Jun. 3, 8, 15, 22, 23, 24

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

The machinery and Boilers of this Steam Trawler 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 certification + L.M.C. 6. 98 in the Register Book.

This case is similar in all respects to the "Lysie" Hull Report No 11702.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 6. 98

Handwritten signature and date: 4/7/98

The amount of Entry Fee... £ 1 : 0 :
 Special ... £ 2 : 11 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :

When applied for, 29/6/18. 98.
 When received, 4. 8. 98

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

Committee's Minute Assigned

TUES. 5 JUL 1898

MACHINERY CERTIFICATE WRITTEN.

+ L.M.C. 6. 98

Signal Letter
 Official
 109
 No., Date,
 Whether British or Foreign Built
 British
 Number of
 Number of
 Rigger
 Stern
 Build
 Galleries
 Head
 Framework vessel
 Number of
 Number of
 and their
 Total to quantity at side
 No. of Engines
 Three
 Number of Iron or Pressure
 Under Tonnage
 Closed-in space
 Space or
 Poop
 Forecastle
 Round House
 Other closed
 Gross
 Deductions, as
 Register
 Name of
 No. of Owners
 Name, Residence
 Pion
 Geor
 Dated 2
 S & Co—P7708—

