

REPORT ON MACHINERY.

Port of Mull Received at London Office MUN 4 JUL 1898

No. in Survey held at Mull 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 Net 47

Master Starling Built at Mull By whom built Carlis & Lim When built 1898

Engines made at Mull By whom made Carlis & Lim when made 1898

Boilers made at Mull By whom made Carlis & Lim when made 1898

Registered Horse Power 55 Owners Pioneer & Fishing Co Port belonging to Limby

Nom. Horse Power as per Section 28 57 Is Electric Light fitted

ENGINES, &c.—Description of Engines Single 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 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 Yes Total surface 24 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 Yes

No. of Bilge pumps one Diameter of ditto 2 1/2 Stroke 10 Can one be overhauled while the other is at work Yes

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

Gector 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 inch

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 board covered

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 Yes

OILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 880 sq ft Is forced draft fitted Yes

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 Yes Area of fire grate in each boiler 33 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 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 in lap long. seams all chip & edge

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 Forc Material Steel Outside diameter 42"

Length of plain part top 1' bottom 1' Thickness of plates 9 1/16" Description of longitudinal joint welded No. of strengthening rings one

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 Yes Working pressure by rules 211 lb

Material of stays Steel Diameter at smallest part 1 3/4" Area supported by each stay 8 x 7 1/4" 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 *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. 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 masts and sail on a trawler.

The foregoing is a correct description,

Manufacturer.

A. E. Leaton

Dates of Survey while building
During progress of work in shops
During erection on board vessel
Total No. of visits
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, 16, 19, 24. Mar. 2, 3, 7, 14, 22, 28 Apr. 4, 18. May 11, 16 Jun. 3, 8, 15, 22, 23, 24
35

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

The Machinery and Boiler 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.R.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.A.C. 6.98

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*

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

Committee's Minute

Assigned

TUES. 5 JUL 1898

MACHINERY CERTIFICATE

WRITTEN.

+ L.M.B. 6.98



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Lloyd's Register
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