

REPORT ON MACHINERY.

No.

8654

Port of Hull Received at London Office WLD. 14 JUN 1893
 No. in Survey held at Hull Date, first Survey Mar 3rd Last Survey Jan. 7th 1893
 Reg. Book. 41 on the Steam Trawler Thrush (Number of Visits 10)
 Master Built at Hull By whom built Charles C. Lim Tons { Gross 134
 Engines made at Hull By whom made Charles C. Lim when made 1893
 Boilers made at Hull By whom made Charles C. Lim when made 1893
 Registered Horse Power 45 Owners Pioneer Steam Trawling Co. Port belonging to Grimsby
 Nom. Horse Power as per Section 28 47

ENGINES, &c.— Description of Engines Simple Comp. Limited & 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 3/4"
 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" Giclor 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 2 1/2" - Giclor
 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 built 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 ft 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 lap long. seams double lap
 Diameter of rivet holes in long. seams 13/16" 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 27/32 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 both 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 8" 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 1/4" Working pressures by rules 166 lb Girders to Chamber tops: Material Iron Depth and
 thickness of girder at centre 6 x 15 1/2" 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 -

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. The bottom end bolts, The main bearing bolts. One set Coupling bolts. One set Feed Pump valves. One set Bilge pump valves, set check valves and safety valve spring*

EARLE'S
SHIPBUILDING & ENGINEERING CO. LIMITED
The foregoing is a correct description,
A. S. Leach Manufacturer.

GENERAL MANAGER & DIRECTOR. *per J. H. V.*
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 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 :* When applied for, *13/6/93*
Special £ *2 : 0 :*
Donkey Boiler Fee £ *✓ :*
Travelling Expenses (if any) £ *✓ :* *25/7/93*

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

Committee's Minute **FRI 16 JUN 1893**
Assigned *+ L.M.C. 6, 93*

MACHINERY CERTIFICATE
WRITTEN



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