

# REPORT ON MACHINERY.

No. 17382

WES. 5 DEC 1895

Port of Hull

Received at London Office

No. in Survey held at Hull

Date, first Survey June 15<sup>th</sup> Last Survey Nov. 24<sup>th</sup> 1905

(Number of Visits 22)

Reg. Book.

22 Supp. on the

Screw Trawler "Deveron"

Gross 233

Net 102

Master

Built at Hull

By whom built Charles S.B. + G. C. L.

When built 1905

Engines made at Hull

By whom made Charles S.B. + G. C. L.

when made 1905

Boilers made at do

By whom made do

when made 1905

Registered Horse Power

Owners The "D" Line Steam Fishing Co. Ltd. Port belonging to Grimsby

Nom. Horse Power as per Section 28 68

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12", 21", 34" Length of Stroke 24" Revs. per minute 102 Dia. of Screw shaft as per rule 7 1/2" Material of screw shaft Iron

Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight in the propeller boss yes If the liner is in more than one length are the joints burned ✓ If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 2'-9"

Dia. of Tunnel shaft as per rule 6.26" Dia. of Crank shaft journals as per rule 6.55" Dia. of Crank pin 7" Size of Crank webs 13x4 3/8" Dia. of thrust shaft under collars 7" Dia. of screw 8'-9" Pitch of screw 11'-0" No. of blades 4 State whether moveable No Total surface 26 sq. ft.

No. of Feed pumps 1 Diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work ✓ No. of Bilge pumps 1 Diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work ✓ No. of Donkey Engines One Sizes of Pumps 5" x 2 1/2" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room One 2" dia. In Holds, &c. Two 2" dia.

2 1/2" Ejector suction from all bilges + discharge on deck. No. of bilge injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump Cond. Is a separate donkey suction fitted in Engine room & size 2 1/2" 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 ✓ 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 Gold suction + winch pipes How are they protected Wood + Casings 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 Before launch the screw shaft tunnel watertight None

Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.— (Letter for record (5)) Total Heating Surface of Boilers 11400 sq. ft. Is forced draft fitted No

No. and Description of Boilers One S.E. Cyl. Mult. Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 14.11.05 Can each boiler be worked separately ✓ Area of fire grate in each boiler 330 sq. ft. No. and Description of safety valves to each boiler Two direct spring Area of each valve 3.9" Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 5 1/2" dia. of boilers 12'-0" Length 10'-0" Material of shell plates Steel

Thickness 1" Range of tensile strength 28-32 Are they welded or flanged No Descrip. of riveting: cir. seams LR Lap long. seams LR 5 Rivets

Diameter of rivet holes in long. seams 1" Pitch of rivets 6 1/2" 85.6 Working pressure of shell by rules 181 lbs Size of manhole in shell 16" x 12"

Per centages of strength of longitudinal joint plate 85.3 Working pressure of shell by rules 181 lbs Size of manhole in shell 16" x 12"

Size of compensating ring 2'-6" x 2'-4" x 1" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 3'-5"

Length of plain part top 6'-2" bottom 5'-8" Thickness of plates crown 4 1/2" Description of longitudinal joint Welded No. of strengthening rings ✓

Working pressure of furnace by the rules 189 lbs Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 5/8" Top 5/8" Bottom 1 1/16"

Pitch of stays to ditto: Sides 8" x 7 3/8" Back 8 1/4" x 7" Top 8" x 7 3/8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 227 lbs

Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 59" Working pressure by rules 200 lbs End plates in steam space: Material Steel Thickness 1" Pitch of stays 16" x 15 1/2" How are stays secured By nuts Working pressure by rules 181 lbs Material of stays Steel

Diameter at smallest part 2 1/16" Area supported by each stay 248" Working pressure by rules 250 lbs Material of Front plates at bottom Steel

Thickness 7/8" Material of Lower back plate Steel Thickness 7/8" + 3/4" Greatest pitch of stays 15 1/2" x 12 3/4" Working pressure of plate by rules 270 lbs

Diameter of tubes 3 1/2" Pitch of tubes 5" x 4 7/8" Material of tube plates Steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 10" x 9 3/4"

Pitch across wide water spaces 13 1/2" Working pressures by rules 183 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9" x 1 3/4" Length as per rule 2'-7 1/2" Distance apart 8" Number and pitch of Stays in each 3 @ 7 3/8"

Working pressure by rules 230 lbs Superheater or Steam chest; how connected to boiler None 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? Is a Report also sent on the Hull of the Ship?

Lloyd's Register Foundation

**DONKEY BOILER—** No. \_\_\_\_\_ Description \_\_\_\_\_

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 \_\_\_\_\_

Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_

Descrip. of riveting long. seams \_\_\_\_\_ Dia. 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 & two bottom-end connecting rod bolts & nuts. Two main bearing bolts & nuts. One set of coupling bolts & nuts. One set of feed & bilge pump valves. Main & donkey feed check valves. Assorted bolts & nuts &c.*

The foregoing is a correct description,

SHIPBUILDING & ENGINEERING CO. LIMITED, *LONDON* Manufacturer.

Dates of Survey while building. During progress of work in shops— *1905:— June 15 July 3. 6. 18 Aug 16. 17 Sep 5. 12. 19 Oct 2. 4. 13. 16.*

During erection on board vessel— *Oct 18. 20. 28. Nov 6. 14. 17. 21. 22. 24.*

Total No. of visits *22.*

Is the approved plan of main boiler forwarded herewith *yes*

“ “ “ donkey “ “ “ *✓*

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

*The Engines and Boiler of this vessel have been constructed under Special Survey, are of good material and workmanship, and have been fitted and secured on board in accordance with the Rules. They are now in good working condition and in my opinion eligible to have the notation of + L.M.C. 11.05 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD H.L.M.C. 11.05.

*J.S.*  
5.12.05

*Emil.*  
5.12.05

The amount of Entry Fee. . . £ 1 : - : . . . When applied for, *30/11/1905*

Special . . . . . £ 10 : 4 : . . . . .

Donkey Boiler Fee . . . . . £ - : - : . . . . . When received, *M.R.*

Travelling Expenses (if any) £ - : - : . . . . . *4/12/1905*

*J. Kerr*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI. 8 DEC 1905*

Assigned *+ L.M.C. 11.05*



MACHINERY CERTIFICATE WRITTEN.

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.