

REPORT ON MACHINERY.

No. 15601

Port of Shull

Received at London Office 17 OCT 1903

Survey held at Bonley & Shull

Date, first Survey Apr. 24

Last Survey Oct 13

1903

(Number of Visits 27)

The Steel Steam Trawler

Hercules

Tons { Gross 261
Net 95

Built at Bonley

By whom built Cochran & Semmell

When built 1903

at Shull

By whom made Chas & Holmes & Co

when made 1903

at Shull

By whom made Chas & Holmes & Co

when made 1903

orse Power

Owners Anglo Norwegian S S Co

Port belonging to Shull

Power as per Section 28 74

Is Refrigerating Machinery fitted No

Is Electric Light fitted No

&c.—Description of Engines Triple Compound

No. of Cylinders Three

No. of Cranks Three

Dimensions 19" 22" 36"

Length of Stroke 24"

Revs. per minute 100

Dia. of Screw shaft

as per rule 7.5"

Material of screw shaft

Steel

shaft fitted with a continuous liner the whole length of the stern tube No

Is the after end of the liner made water tight No

If the liner is in more than one length are the joints burned No

If the liner does not fit tightly at the part No

bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive No

If two liners are used, is the shaft lapped or protected between the liners No

Length of stern bush 36"

Dia. of Crank shaft journals

as per rule 6.75"

as fitted 7"

Dia. of Crank pin

as per rule 7.12"

as fitted 7.5"

Dia. of Crank webs

14" x 4 7/8"

Dia. of screw 9.0"

Pitch of screw 11.0"

No. of blades 4

State whether moveable No

Total surface

28 sq ft

pumps one Diameter of ditto 2 3/8" Stroke 14 1/4" Can one be overhauled while the other is at work No

pumps one Diameter of ditto 2 3/8" Stroke 14 1/4" Can one be overhauled while the other is at work No

Engines one

Sizes of Pumps 2 3/8" x 5"

No. and size of Suctions connected to both Bilge and Donkey pumps

Room Two 2'

In Holds, &c. Two 2'

Is there a suction in Engine Bilge & hold and discharge on deck No

Are the suction pipes fitted with roses No Are the roses in Engine room always accessible No

Are the sluices on Engine room bulkheads always accessible No

Are the connections with the sea direct on the skin of the ship No Are they Valves or Cocks both

Are they sufficiently high on the ship's side to be seen without lifting the stokehold plates No

Are the discharge pipes above or below the deep water line above

Are the blow off cocks fitted with a spigot and brass covering plate No

Are they carried through the bunkers suctions to forward How are they protected wood covered

Are the cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times No

Are the suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges No

Are the stern tube, propeller, screw shaft, and all connections examined in dry dock how & how Is the screw shaft tunnel watertight how

Is the tunnel worked from No

S, &c.— (Letter for record S) Total Heating Surface of Boilers 1148 sq ft Is forced draft fitted No

Description of Boilers One Cylindrical

Working Pressure 200 lb Tested by hydraulic pressure to 400 lb

Can each boiler be worked separately No Area of fire grate in each boiler 55 sq ft

No. and Description of safety valves to Two Spring

Area of each valve 3.9 sq ft Pressure to which they are adjusted 185 lb

Are they fitted with easing gear No

Distance between boilers or uptakes and bunkers or woodwork 7"

Mean dia. of boilers 12.3" Length 9.9" Material of shell plates Steel

Range of tensile strength 29.32 Are they welded or flanged No

Descrip. of riveting: cir. seams all on top long. seams all on top

rivet holes in long. seams 1/8" Pitch of rivets 7 1/4"

Lap of plates or width of butt straps 15 1/2"

Working pressure of shell by rules 206 lb Size of manhole in shell 16" x 12"

Compensating ring 7" x 1/8" No. and Description of Furnaces in each boiler Two Furnaces

Material Steel Outside diameter 42"

Thickness of plates: crown 10/16" Description of longitudinal joint welded

No. of strengthening rings ribbed

Pressure of furnace by the rules 221 lb Combustion chamber plates: Material Steel

Thickness: Sides 2 3/32" Back 1 1/16" Top 2 3/32" Bottom 2 3/32"

Stays to ditto: Sides 9" Back 9" Top 9"

If stays are fitted with nuts or riveted heads both Working pressure by rules 206 lb

Diameter at smallest part 15/8" Area supported by each stay 9" x 9"

Working pressure by rules 250 lb End plates in steam space: Steel

Thickness 1 1/16" Pitch of stays 16" How are stays secured all on top

Working pressure by rules 208 lb Material of stays Steel

Area supported by each stay 16" x 16" Working pressure by rules 247 lb

Material of Front plates at bottom Steel

Material of Lower back plate Steel Thickness 15/16"

Greatest pitch of stays 14 3/4" Working pressure of plate by rules 200 lb

Pitch of tubes 4 5/8" Material of tube plates Steel

Thickness: Front 15/16" Back 29/32" Mean pitch of stays 9 1/4"

Working pressures by rules 200 lb Girders to Chamber tops: Material Steel

Depth and distance apart 8" Number and pitch of Stays in each two 9"

Superheater or Steam chest; how connected to boiler No

Can the superheater be shut off and the boiler worked No

Diameter 8" Length 31" Thickness of shell plates 15/16"

Material Steel Description of longitudinal joint welded

Diam. of rivet 1/8" Pitch of rivets 7 1/4"

Working pressure of shell by rules 206 lb Diameter of flue 8"

Material of flue plates Steel Thickness 15/16"

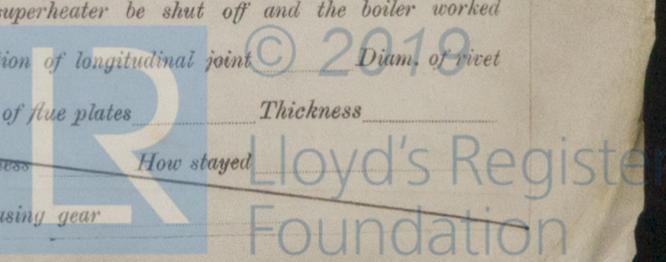
Distance between rings 8" Working pressure by rules 200 lb

End plates: Thickness 15/16" How stayed ribbed

Working pressure of end plates 200 lb Area of safety valves to superheater 3.9 sq ft

Are they fitted with easing gear No

W486-0017



DONKEY BOILER— No. _____ Description *None*

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:— *The top end bolts. The bottom end bolts. Two main bearing bolts. One set coupling bolts. One set dead pump valves. One set Bridge pump valves. One set Check valves. Safety valve spring*

The vessel efficient with masts and sails as a trawler.

The foregoing is a correct description,
Charles D. Holmes Manufacturer.

Dates of Survey while building

During progress of work in shops - -	1903. - Apr 24. May 5. 14. 25. Jun 4. 10. 18. 25. July 1. 7. 15. 28. Aug 6. 17. 19. 21. Sep 9. 14. 17
During erection on board vessel - -	Sep 23. 28. 30. Oct 3. 7. 8. 9. 13.
Total No. of	s 27

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

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

Notes

At the request of the Superintendent Engineer the safety valves have been adjusted to 185 lbs. There is no reason why the pressure should not be marked 200 lbs in the Register Book.

The Machinery and Boilers of this Steamer 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 in the notification. + L.M.C 10.03 in the Register Book.

It is submitted that this vessel is eligible for **THE RECORD. + L.M.C 10.03**

See
EL 17.10.03
 17.10.03

The amount of Entry Fee..	£ 1 : -	When applied for,	14/10/03
Special	£ 11 : 2	When received,	2.11.03
Donkey Boiler Fee .. .	£ - : -		
Travelling Expenses (if any) £	- : -		31.10.03

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

Committee's Minute **TUES. 20 OCT 1903**

Assigned *+ L.M.C 10,03*

MACHINERY CERTIFICATE WRITTEN.



Certificate (if required) to be sent to Hull

The Surveyors are requested not to write on or below the space for Committee's Minute.