Rpt. 4.

REPORT ON MACHINERY. No. 17317

REC. 11 NOV 1905

Port of Hull Received at London Office 19

No. in Reg. Book. 19 Suff Survey held at Hull Date, first Survey July 15th Last Survey 8th Nov 1905 (Number of Visits 31)

on the Steel Sc K. Pelican Tons Gross 205 Net 73

Master Built at Selby By whom built Messrs Cochrane Sons When built 1905

Engines made at Hull By whom made Messrs when made

Boilers made at Hull By whom made Charles D. Holmes & Co when made 1905

Registered Horse Power 67 Owners Cleethorpes Steam Trawling Co Port belonging to Grimsby

Nom Horse Power as per Section 28 ~~66~~ Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

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

Dia. of Cylinders 12" ~ 21" ~ 34" Length of Stroke 24" Revs. per minute 106 Dia. of Screw shaft as per rule 7" as fitted 7⅛" 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 burnt ~~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~~ Length of stern bush 31"

Dia. of ~~Tunnel~~ plain shaft as per rule 6.26 as fitted 6⅝" Dia. of Crank shaft journals as per rule 6.56 as fitted 6¾" Dia. of Crank pin 6¾" Size of Crank webs 12⅞" × 4⅞" Dia. of thrust shaft under part Thrust collars 6¾" Dia. of screw 8'-6" Pitch of screw 11'-0" No. of blades 4 State whether moveable No Total surface 27 ☐ft

No. of Feed pumps 1 Diameter of ditto 2 1/16" Stroke 24" ~~Can one be overhauled while the other is at work~~

No. of Bilge pumps 1 Diameter of ditto 2 1/16" Stroke 24" ~~Can one be overhauled while the other is at work~~

No. of Donkey Engines 1 Sizes of Pumps 2¾" × 5" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2" In Holds, &c. One each 2", to each slush well, Ejector suction from eng. room bilge + slush wells + discharge on deck

No. of bilge injections 1 sizes 3 Connected to condenser, or to circulating pump pump Is a separate donkey suction fitted in Engine room & size Yes 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 O

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 Slush well suctions How are they protected wood casing

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 Launching Is the screw shaft tunnel watertight No

~~Is it fitted with a watertight door~~ ~~worked from~~

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 1110 ☐ft Is forced draft fitted No

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

Date of test 25.10.05 ~~Can each boiler be worked separately~~ Area of fire grate in ~~each~~ boiler 31.3 ☐ft No. and Description of safety valves to ~~each~~ boiler Two Spring Area of each valve 3.98 ☐" 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 6 ~~Mean~~ Ex dia. of boilers 12'~0" Length 10'~0" Material of shell plates Steel

Thickness 1" Range of tensile strength tons 29 32 ~~Are they welded or flanged~~ Descrip. of riveting: cir. seams L.D. long. seams D.B.S.S.R

Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 7" ~~Lap of plates~~ or width of butt straps 15"

Per centages of strength of longitudinal joint rivets 88.7 plate 85.26 Working pressure of shell by rules 186 lbs Size of manhole in shell 16" × 12"

Size of compensating ring 7" × 1" No. and Description of Furnaces in ~~each~~ boiler 2 plain Material Steel Outside diameter 41"

Length of plain part top 5'-9" bottom Thickness of plates crown 3/4" bottom Description of longitudinal joint welded No. of strengthening rings 0

Working pressure of furnace by the rules 190 lbs Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 11/16" Top 21/32" Bottom 11/16"

Pitch of stays to ditto: Sides 9" × 8½" Back 9" × 8½" Top 8" × 8½" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 201 lbs

Material of stays Steel Diameter at smallest part 1 7/8" Area supported by each stay 105.75 Working pressure by rules 204 lbs End plates in steam space: Material Steel Thickness 1 1/32" Pitch of stays 16" × 16" How are stays secured plates, nut in & out Working pressure by rules 196 lbs Material of stays Steel

Diameter at smallest part 2 7/8" Area supported by each stay 256 ☐" Working pressure by rules 225 lbs Material of Front plates at bottom Steel

Thickness 27/32" Material of Lower back plate Steel Thickness 15/16" Greatest pitch of stays 15" Working pressure of plate by rules 198 lbs

Diameter of tubes 3¼" Pitch of tubes 4 5/8" Material of tube plates Steel Thickness: Front 27/32" Back ⅞" Mean pitch of stays 9¼"

Pitch across wide water spaces 15" Working pressures by rules 188 lbs Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 8¼" × 2" Length as per rule 2'-8⅞" Distance apart 8 Number and pitch of Stays in each 3 — 8½"

Working pressure by rules 198 lbs 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

If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?

[2000—6,04—Copyable Ink.]

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 ____ Plates ____ 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 each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts nuts, one set each air, circulating, feed & bilge pump valves, and a quantity of assorted bolts nuts &c.

The foregoing is a correct description,

Charles D. Holmes & Co. Manufacturer.

Dates of Survey while building — During progress of work in shops - - } 1905:- July 15. 21. 26. Aug 15. 21. 22. 25. 31. Sep. 7. 8. 12. 13. 15. 19. 26. 27 Oct 3 4. 10.

During erection on board vessel - - } Oct 19. 20. 23. 24. 25. 26. 27. 31 Nov. 2. 3. 4. 8

Total No. of visits 31

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " "

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery and boilers of this vessel have been inspected throughout construction in accordance with the Societys Rules. The materials and workmanship are good. The boilers tested by hydraulic pressure and with the engines placed on board and tested under steam they are now in good order, and safe working condition, and respectfully submitted as being eligible in my opinion to be classed with the notification of ✠ L.M. 6. 11. 05 in the Register Book

It is submitted that this vessel is eligible for THE RECORD ✠ L.M.C. 11-05.

Certificate (if required) to be sent to Hull.

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

The amount of Entry Fee ..	£ 1 : . : .	When applied for, 10/11/1905
Special	£ 10 . 1 : .	
Donkey Boiler Fee	£ - : - : -	When received, 30/11/05 1905
Travelling Expenses (if any)	£ - : 8 2	

TUES. 14 NOV 1905

Committee's Minute ____

Assigned + L M 6. 11 05

James Barclay. Engineer Surveyor to Lloyd's Register of British & Foreign Shipping. 10 11. 05

MACHINERY CERTIFICATE WRITTEN.