Rpt. 4.

REPORT ON MACHINERY. No. 17543

Port of Hull

THUR. 8 FEB 1906

Received at London Office 19

No. in Reg. Book. 55 Suff | Survey held at Hull | Date, first Survey Aug 15/05 | Last Survey 1st Feby 1906 (Number of Visits 42)

on the Steel S.S. Belovar | Tons Gross 242 Net 94

Master | Built at Beverley | By whom built Messrs Cook, Welton & Gemmell | When built 1906

Engines made at Hull | By whom made Messrs Charles D. Holmes & Co | when made 1906

Boilers made at | By whom made | when made

Registered Horse Power | Owners Earl Steam Fishing Co Ltd | Port belonging to Grimsby

Nom. Horse Power as per Section 28 ~~68~~ 69 | Is Refrigerating Machinery fitted No | Is Electric Light fitted No

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

Dia. of Cylinders 12¼" ~ 22" ~ 35" | Length of Stroke 24" | Revs. per minute 112 | Dia. of Screw shaft as per rule 7·12" as fitted 7½" | Material of screw shaft Steel

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 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~~ plain part

Length of stern bush 30½"

Dia. of ~~Tunnel~~ shaft of Thrust as per rule 6·38" as fitted 6⅞" | Dia. of Crank shaft journals as per rule 6·7" as fitted 7" | Dia. of Crank pin 7" | Size of Crank webs 13⅜" × 4⅞" | Dia. of thrust shaft under collars 7" | Dia. of screw 8'-7½" | Pitch of screw 11'-0" | No. of blades 4 | State whether moveable No | Total surface 28 ☐ft

No. of Feed pumps 1 | Diameter of ditto 2⅛" | Stroke 24" | ~~Can one be overhauled while the other is at work~~

No. of Bilge pumps 1 | Diameter of ditto 2⅛" | Stroke 24" | ~~Can one be overhauled while the other is at work~~

No. of Donkey Engines One | Sizes of Pumps 2¾" × 5" | No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two two inches | In Holds, &c. One 2" to each, main hold & two slush wells, & ejector suction from Eng. Room bilge, main hold, & 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

What pipes are carried through the bunkers hold suction | 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 None

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

BOILERS, &c.— (Letter for record B) | 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 30·11·05 | ~~Can each boiler be worked separately~~ | Area of fire grate in ~~each~~ boiler 32·8 ☐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 6½" | & ~~Mean~~ dia. of boilers 12'-6" | Length 10'-0" | Material of shell plates Steel

Thickness 1 1/32" | Range of tensile strength 29·32 tons | ~~Are they welded or flanged~~ | Descrip. of riveting: cir. seams L. D. | long. seams D.B.S.T.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 86· plate 85·2 | Working pressure of shell by rules 185 lbs | Size of manhole in shell 16" × 12"

Size of compensating ring 7" × 1 1/32" | No. and Description of Furnaces in ~~each~~ boiler Two plain | Material Steel | Outside diameter 3'-7"

Length of plain part top / bottom 5'-10" | Thickness of plates crown 49/64" bottom | Description of longitudinal joint Welded | No. of strengthening rings 0

Working pressure of furnace by the rules 185 lbs | Combustion chamber plates: Material Steel | Thickness: Sides 23/32" | Back 11/16" | Top 23/32" | Bottom 23/32"

Pitch of stays to ditto: Sides 9" × 8½" | Back 9" × 8½" | Top 8¾" × 8½" | If stays are fitted with nuts or riveted heads Nuts | Working pressure by rules 213 lbs

Material of stays Steel | Diameter at smallest part (margin) 1¾" | Area supported by each stay 105·75 ☐" | Working pressure by rules 204 lbs | End plates in steam space:

Material Steel | Thickness 1 3/32" | Pitch of stays 17½" × 17½" | How are stays secured screwed into both end plates nut in & out & washer out | Working pressure by rules 185 lbs | Material of stays Steel

~~Diameter~~ Area at smallest part 6·21 | Area supported by each stay 306·25 ☐" | Working pressure by rules 202 lbs | Material of Front plates at bottom Steel

Thickness 7/8" | 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 4⅝" × 4¾" | Material of tube plates Steel | Thickness: Front 7/8" | Back 7/8" | Mean pitch of stays 9⅜

Pitch across wide water spaces 15" | Working pressures by rules 180 lbs | Girders to Chamber tops: Material Iron | Depth and thickness of girder at centre 9" × 1¾" | Length as per rule 2'-8" | Distance apart 8¾" | Number and pitch of Stays in each 3 ~ 8½"

Working pressure by rules 193 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? Yes

[2000—5-03—Copyable Ink.]

W950-0050

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 and nuts, one set each air, circulating, feed and bilge pump valves, ca quantity of assorted bolts, nuts etc.

The foregoing is a correct description,

Charles D. Holmes & Co Manufacturer.

Dates of Survey while building — During progress of work in shops — 1905:- Aug 15. 21. 22. 25. 31. Sep 8. 12. 13. 19. 26. 27. Oct 3. 4. 10. 20. 24. 25. Nov 1. 2. 13. 14. 22. 23.

During erection on board vessel — Nov 24. 28. 29. 30 Dec 5. 6. 13. 21. 1906:- Jan 3. 9. 11. 15. 17. 18. 19. 23. 25. 29 Feb 1.

Total No. of visits 42.

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 boiler of this vessel have been inspected throughout, — construction in accordance with the Society's Rules. The materials and workmanship are good. The boiler 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 notation of ✠ L.M.C. 2.06 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD ✠ L.M.C. 2.06.

8.2.06

8.2.06

Certificate (if required) to be sent to Hoult

(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,	
Special	£ 10 : 7 : -	6/2 1906	1.3.06
Donkey Boiler Fee	£ - : - : -	When received,	
Travelling Expenses (if any)	£ - : 1 : -	28/2/06	

James Barclay.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
1.2.06

Committee's Minute FRI. 9 FEB 1906

Assigned + LM 6.2.06

MACHINERY CERTIFICATE WRITTEN