

# REPORT ON MACHINERY.

4703

No. 7705 Port of Hull Received at London Office TUES. 17 FEB. 1891  
 No. in Survey held at Beverley & Hull Date, first Survey Sep. 29<sup>th</sup> 1890 Last Survey Feb 10<sup>th</sup> 1891  
 Reg. Book. "Bombay" (Number of Visits 19)  
 Ship on the Iron Steam Trawler Tons { Gross 167  
 Master Beverley Built at Beverley By whom built Cochrane Cooper & Schofield When built 1890  
 Engines made at Hull By whom made Amos & Smith when made 1891  
 Boilers made at Hull By whom made Amos & Smith when made 1891  
 Registered Horse Power 50 Owners Hull Steam Fishing & Ice Co Port belonging to Hull

## ENGINES, &c.—

Description of Engines Triple Expansion Inverted Direct acting No. of Cylinders Three  
 Diam. of Cylinders 22, 19, 31 Length of Stroke 22 Rev. per minute 6 Point of Cut off, High Pressure 1/2 Low Pressure 1/2  
 Diameter of Screw shaft 6 3/4 Diam. of Tunnel shaft 6 1/2 Diam. of Crank shaft journals 6 1/4 Diam. of Crank pin 6 1/4 size of Crank webs 7 1/2 x 4 1/4  
 Diameter of screw 4' 9" Pitch of screw 1' 10" to 10' 3" No. of blades 4 state whether moveable no total surface 21 1/2  
 No. of Feed pumps one diameter of ditto 2 1/4 Stroke 13 1/2 Can one be overhauled while the other is at work —  
 No. of Bilge pumps one diameter of ditto 2 1/4 Stroke 13 1/2 Can one be overhauled while the other is at work —  
 Where do they pump from Hold & Engine room Bilge  
 No. of Donkey Engines one Size of Pumps 2 3/4 x 4" duplex Where do they pump from Bilge Hold Sea & Netwell  
Discharges to: Boiler, Condenser, Deck and Overboard. — 3" Ejector suction in Eng  
 Are all the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible —  
 No. of bilge injections one and sizes 3" Are they connected to condenser, or to circulating pump Circulating pump  
 How are the pumps worked Levers from intermediate engine  
 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 forward suction How are they protected Wood cased  
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Launched 24<sup>th</sup> Dec. 1890  
 Is the screw shaft tunnel watertight — and fitted with a sluice door — worked from —

## BOILERS, &c.—

No. of Boilers one Description Cyl. Return Multitub. Material Steel Letter (for record) S  
 Working Pressure 160 D Tested by hydraulic pressure to 320 Date of test 11<sup>th</sup> Dec. 1890  
 Description of superheating apparatus or steam chest none  
 Can each boiler be worked separately — Can the superheater be shut off and the boiler worked separately —  
 No. of square feet of fire grate surface in each boiler 24 Description of safety valves spring No. to each boiler two  
 Area of each valve 4' 9" Are they fitted with easing gear yes No. of safety valves to superheater — area of each valve —  
 Are they fitted with easing gear — Smallest distance between boilers and bunkers or woodwork 8" Diameter of boilers 10' 6"  
 Length of boilers 9' 4 1/2 description of riveting of shell long. seams butt. 3 rivet circum. seams Lap. 2 rivet Thickness of shell plates 7/32  
 Diameter of rivet holes 1" whether punched or drilled drilled pitch of rivets 7/8 Lap of plating 14 3/4"  
 Percentage of strength of longitudinal joint 80 2/3% working pressure of shell by rules 160 D size of manholes in shell 16" x 12"  
 Size of compensating rings 6" x 7/32 No. of Furnaces in each boiler two Description of Furnaces Holmes patent  
 Outside diameter 35" length 6' 6" thickness of plates 7/16 description of joint welded if rings are fitted yes  
 Greatest length between rings 20" working pressure of furnace by the rules 160 combustion chamber plating, thickness, sides 7/16 back 7/16 top 7/16  
 Pitch of stays to ditto, sides 7 3/4 back 7 1/2 top 7 3/4 If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 162  
 Diameter of stays at smallest part 1 3/4 working pressure of ditto by rules 163 end plates in steam space, thickness 1 1/2  
 Pitch of stays to ditto 14 7/16" how stays are secured Screwed into plates working pressure by rules 140 D diameter of stays at smallest part 2 7/16  
 working pressure by rules 190 Front plates at bottom, thickness 3/16 Back plates, thickness 1/16  
 Greatest pitch of stays 18" working pressure by rules 160 Diameter of tubes 3 1/2 pitch of tubes 4 3/16 thickness of tube plates, front 3/16 back 3/16 how stayed stay plates pitch of stays 9 7/16 width of water spaces 10"  
 Diameter of Superheater or Steam chest — length — thickness of plates — description of longitudinal joint — diam. of rivet holes —  
 Pitch of rivets — working pressure of shell by rules — diameter of flue — thickness of plates — If stiffened with rings —  
 Distance between rings — working pressure by rules — end plates of superheater, or steam chest; thickness — how stayed —  
 Superheater or steam chest; how connected to boiler —



## DONKEY BOILER—

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 \_\_\_\_\_ if fitted with easing gear \_\_\_\_\_ if steam from main boilers can  
 enter the donkey boiler \_\_\_\_\_ diameter of donkey boiler \_\_\_\_\_ length \_\_\_\_\_ description of riveting \_\_\_\_\_  
 Thickness of shell plates \_\_\_\_\_ diameter of rivet holes \_\_\_\_\_ whether punched or drilled \_\_\_\_\_ pitch of rivets \_\_\_\_\_ lap of plating \_\_\_\_\_  
 per centage of strength of joint \_\_\_\_\_ thickness of crown plates \_\_\_\_\_ stayed by \_\_\_\_\_  
 Diameter of furnace, top \_\_\_\_\_ bottom \_\_\_\_\_ length of furnace \_\_\_\_\_ thickness of 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 plates \_\_\_\_\_ thickness of water tubes \_\_\_\_\_

SPARE GEAR. State the articles supplied:— *2 Top end belts, 2 bottom end belts, two main  
 bearing belts, 1 set of campering belts, one set feed pump valves, one  
 set bilge pump valves*

The foregoing is a correct description,

*Wm. T. Smith* Manufacturer.

## General Remarks

(State quality of workmanship, opinions as to class, &amp;c.)

*The machinery and boiler  
 of this vessel were built under Special Survey. The material and  
 workmanship were found to be good. The safety valves were set to  
 blow off at 160 lbs and the engines were found to work satisfactorily  
 In my opinion this vessel is eligible to have the notification  
 + L.M.C. 2-91 recorded.*

*It is submitted that this vessel is  
 eligible to have + L.M.C. 2-91 recorded*

*M.A.*

*17-2-91*

The amount of Entry Fee .. £ / : - : - received by me,

Special .. £ 8 : - : -

Donkey Boiler Fee .. £ - : - : -

Certificate (if required) .. £ - : - : -

To be sent as per margin.

(Travelling Expenses, if any, £ ..)

Committee's Minute FRL 20 FEB 1891

*+ L.M.C. 2/91*

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

