

REPORT ON MACHINERY.

No. 16955

Port of Hull

Received at London Office WELL 5 JUL 1905

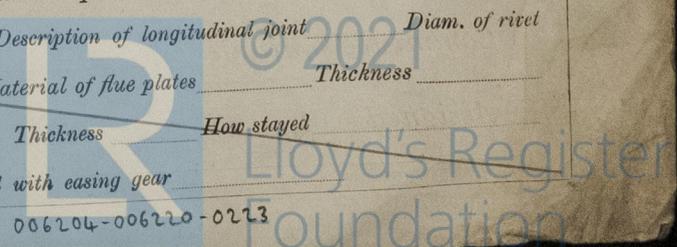
No. in Survey held at Hull Date, first Survey Mar 7th Last Survey 26th June 1905
 Reg. Book. 433 on the Steel S. K. Viola (Number of Visits 24)
 Master F. Crocker Built at Selby By whom built Cochrane Sons Tons { Gross 228 Net 91
 Engines made at } Hull By whom made } Amos Smith when made } 1905
 Boilers made at } Hull By whom made } Amos Smith when made } 1905
 Registered Horse Power 608 Owners Edwin Bacon Port belonging to Gimsby
 Nom. Horse Power as per Section 28 608 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 112 Dia. of Screw shaft 7 7/8" 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 One length 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 36"
 Dia. of Plain shaft as per rule 6.26 Dia. of Crank shaft journals as per rule 6.57 Dia. of Crank pin 6 7/8" Size of Crank webs 10 1/2" x 4 3/8" Dia. of thrust shaft under
 collars 6 7/8" Dia. of screw 8" - 6" Pitch of screw 10" - 6" No. of blades 4 State whether moceable No Total surface ✓
 No. of Feed pumps One Diameter of ditto 2 7/8" Stroke 13" Can one be overhauled while the other is at work ✓
 No. of Bilge pumps One Diameter of ditto 3" Stroke 13" Can one be overhauled while the other is at work ✓
 No. of Donkey Engines One Sizes of Pumps 3" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room One Two inches In Holds, &c. One each 2" to each slush
 well, & to hold, and ejector suction from engine room bilge
 No. of bilge injections 1 sizes 3" Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room Yes size 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 0
 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 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 8) Total Heating Surface of Boilers 1164 Is forced draft fitted No
 No. and Description of Boilers One byl. Multi. Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs
 Date of test 15.5.05 Can each boiler be worked separately Area of fire grate in each boiler 34 No. and Description of safety valves to
 each boiler Two Spring Area of each valve 3.976 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" Int. 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 Descrip. of riveting: cir. seams L. D. long. seams D. B. S. L. B.
 Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 7.63" Lap of plates or width of butt straps 16 1/2"
 Per centages of strength of longitudinal joint rivets 96.5 Working pressure of shell by rules 180 lbs Size of manhole in shell 16" x 12"
 plate 85.2 Size of compensating ring 40" x 30" x 1" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 42 3/4"
 Length of plain part 5-7" Thickness of plates crown 4.9" Description of longitudinal joint Welded No. of strengthening rings 0
 bottom 6.4" Working pressure of furnace by the rules 190 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/32" Back 1/16" Top 1/16" Bottom 3/32"
 Pitch of stays to ditto: Sides 9 1/4" x 7" Back 9 1/4" x 8 1/2" Top 7 1/2" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 207 lbs
 Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 64.75 Working pressure by rules 217 lbs End plates in steam space:
 Material Steel Thickness 3/32" Pitch of stays 16" x 15 1/2" How are stays secured screwed into end plates Working pressure by rules 181 lbs Material of stays Steel
 Diameter at smallest part 2 3/4" Area supported by each stay 244 Working pressure by rules 206 lbs Material of Front plates at bottom Steel
 Thickness 29" Material of Lower back plate Steel Thickness 15" Greatest pitch of stays 14" Working pressure of plate by rules 180 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 5" x 4 1/4" Material of tube plates Steel Thickness: Front 3/32" Back 3/32" Mean pitch of stays 9 1/2" x 10"
 Pitch across wide water spaces 14" Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 7 3/4" x 2" Length as per rule 2' 9" Distance apart 8" Number and pitch of Stays in each 3 - 7 1/2"
 Working pressure by rules 180 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. In a Report also sent on the Hull of the Ship.

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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 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 & bilge pump valves, a quantity of assorted bolts & nuts etc.*

The foregoing is a correct description,
 FOR AMOS & SMITH
 Manufacturer. *W.S. Hyde*
 MANAGER *per JH*

Dates of Survey while building

During progress of work in shops—	1905:—	Mar 7, 11, 15, 17, 21, 30	Apr 3, 11, 19	Apr 29, May 5, 11, 15, 19.
	During erection on board vessel—	May 24, 27, 30	Jun 7, 16, 19, 21, 22, 24, 26.	
	Total No. of visits	24.		

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

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery & boiler of this vessel have been inspected, throughout construction, in accordance with the Society's Rules. The material 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.C. 6.05 in the Register Book.*

It is submitted that this vessel is eligible for
THE RECORD L.M.C. 6.05

Jms.
5.7.05

Certificate (if required) to be sent to Hull

The amount of Entry Fee	£ 1 : : : .	When applied for,	<i>4/7/1905</i>
Special	£ 10 : 7 : .		
Donkey Boiler Fee	£ - : - : .	When received,	<i>31.7.05</i>
Travelling Expenses (if any)	£ - : 8 : 2		

James Barclay
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
 29.6.05

Committee's Minute *FRI. 7 JUL 1905*

Assigned *+ L.M.C. 6.05*

