

# REPORT ON MACHINERY.

Loc No. 67818  
Hull 17,345

Port of London

Received at London Office 3/11/05

No. in Survey held at Yarmouth Date, first Survey Mar 31 Last Survey Sept 15 1905  
 Reg. Book. 24 Suff on the Thames Engines for Gode. S.B. Co No 77 (No 266) Number of Volls 11 + 12 = 23 Hull Dec 7/05  
 Master Gode Built at Gode By whom built Gode S.B. & R. Coles Tons { Gross 310 Net 99  
 Engines made at Yarmouth By whom made Crabtree & Co Ltd when made 1905  
 Boilers made at Stockton/Lees By whom made Blair & Co when made 1905  
 Registered Horse Power ✓ Owners E. P. Hutchinson Port belonging to Hull  
 Nom. Horse Power as per Section 28 67 Is Refrigerating Machinery fitted ✓ Is Electric Light fitted ✓

ENGINES, &c.—Description of Engines Compound Surface Condensing No. of Cylinders two No. of Cranks two  
 Dia. of Cylinders 16" & 34" Length of Stroke 24" Revs. per minute 120 Dia. of Screw shaft as per rule 7.6 Material of steel  
 as fitted 7.875" screw shaft  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no 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 ✓ 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 ✓  
 liners are fitted, is the shaft lapped or protected between the liners yes paint Length of stern bush 3'-6"  
 Dia. of Tunnel shaft as per rule 6.7" Dia. of Crank shaft journals as per rule 7.03" Dia. of Crank pin 7 1/8" Size of Crank webs 4 1/2" x 9" Dia. of thrust shaft under  
 collars 7 1/8" Dia. of screw 8'-6" Pitch of screw 11'-0" No. of blades 4 State whether moveable no Total surface 25 1/2 sq ft  
 No. of Feed pumps one Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work ✓  
 No. of Bilge pumps one Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work ✓  
 No. of Donkey Engines One Sizes of Pumps 5" x 3" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room One 2 1/2" dia. In Holds, &c. One 2 1/2" dia.

No. of bilge injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump air pump a separate donkey suction fitted in Engine room & size yes, 2 1/2" dia.  
 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 ✓  
 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 & tank 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 launch the screw shaft tunnel watertight None  
 Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.— (Letter for record ) Total Heating Surface of Boilers 12794 sq ft Is forced draft fitted no  
 No. and Description of Boilers Working Pressure 130 lbs Tested by hydraulic pressure to  
 Date of test Can each boiler be worked separately Area of fire grate in each boiler No. and Description of safety valves to  
 each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear  
 Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates  
 Thickness Range of tensile strength Are they welded or flanged Descrip. of riveting: cir. seams long. seams  
 Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps  
 Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell  
 plate  
 Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter  
 Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings  
 bottom  
 Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom  
 Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules  
 Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:  
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays  
 Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom  
 Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules  
 Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays  
 Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and  
 thickness of girder at centre Length as per rule Distance apart Number and pitch of Stays in each  
 Working pressure by rules 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

**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 top & two bottom-end connecting rod bolts & nuts. Two main bearing bolts & nuts. One set of coupling bolts & nuts. One set of feed & bilge pump valves. Main & donkey feed check valves. Assorted bolts & nuts & nuts.*  
 The foregoing is a correct description,  
 Manufacturer. *W.F. Craven*  
 ORABTREE & CO., LTD.  
 MANAGING DIRECTOR

Dates of Survey while building  
 During progress of work in shops— 05 Mar 31 Apr 18 May 1. 16. 24 29 June 5 33 July 7 Aug 17 Sep 15  
 During erection on board vessel— Jul. 1905— July 24 Sep 26. 29 Oct 12. 19. 24. 26. 27. 30 Nov 2. 3. 4. Dec. 7  
 Total No. of visits *11 + 12 = 23* Is the approved plan of main boiler forwarded herewith \_\_\_\_\_  
 " " " donkey " " " \_\_\_\_\_

**General Remarks** (State quality of workmanship, opinions as to class, &c.) *These engines have been constructed under special survey & in accordance with the rules, the workmanship is good. The engines have been forwarded to Hull for fitting on board.*

*These Engines have now been fitted and secured on board in accordance with the Rules.*

*The Engines and Boilers of this vessel are now in good working condition and in my opinion eligible to have the notation of +LMC 12.05 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD +LMC 12.05.

*P.M.S.*  
 12.12.05  
*H.S.*  
 12.12.05

The amount of Entry Fee. £ 1 : . . . . .  
 Special £10.10. <sup>1/3 due on 1/3 due Hull</sup> 6 : 14 : . . . . .  
 Donkey Boiler Fee <sup>paid at Hull</sup> : : : : :  
 Travelling Expenses (if any) £ 1 : 5 : 6 . . . . .  
 £ 8.19.6.

*Frank L. Sturgeon & J. M. . . . .*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute \_\_\_\_\_  
 Assigned \_\_\_\_\_  
 FRI. 15 DEC 1905  
 +LMC 12.05



MINISTRY CERTIFICATE WRITTEN.

Certificate (if required) to be sent to \_\_\_\_\_  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)