

REPORT ON MACHINERY.

Port of Leith

Received at London Office WED 23 OCT 1895

No. in Survey held at Kinghorn
Reg. Book. on the S.S. "Clia"

Date, first Survey 10th May

Last Survey 1st October 1895

(Number of Visits 1)

Tons { Gross 1235.24
Net 766.87

Master B. White Built at Kinghorn By whom built John Scott & Co When built 1895

Engines made at Kinghorn By whom made John Scott & Co when made 1895

Boilers made at do By whom made do when made 1895

Registered Horse Power 130 Owners Messrs Scott & Co Port belonging to London

Nom. Horse Power as per Section 28 130

ENGINES, &c.— Description of Engines Triple expansion on three cranks No. of Cylinders 3

Diameter of Cylinders 17"-27"-45" Length of Stroke 33" Revolutions per minute 90 Diameter of Screw shaft 8.26"
as per rule 7.85" as fitted 8.3/4"

Diameter of Tunnel shaft 9.3/8" Diameter of Crank shaft journals 8.3/4" Diameter of Crank pin 8.3/4" Size of Crank webs 11 1/2" x 6"

Diameter of screw 11' 6" Pitch of screw 13' 0" No. of blades 4 State whether moveable no Total surface 40 f

No. of Feed pumps 2 Diameter of ditto 3" Stroke 19" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3" Stroke 19" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 9 1/2" x 6" x 10" x 5 1/2" x 3 1/2" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room one 2 1/2" dia. & two 2 1/4" dia. In Holds, &c. two to fore hold 2 1/4" dia., one to after hold 2 1/2" dia. & one to tunnel well 2 1/4" dia.

No. of bilge injections 1 sizes 4" Connected to condenser, or to circulating pump yes Is a separate donkey suction fitted in Engine room & size yes 2 1/2"

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 none

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 none How are they protected ✓

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 new vessel Is the screw shaft/tunnel watertight yes

Is it fitted with a watertight door yes worked from Top platform.

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 2145 f

No. and Description of Boilers one multitubular single ended Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs

Date of test 29.9.95 Can each boiler be worked separately ✓ Area of fire grate in each boiler 59 f No. and Description of safety valves to each boiler two - Spring

Area of each valve 7.07 sq" Pressure to which they are adjusted 160 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean diameter of boilers 14' 9"

Length 10' 6" Material of shell plates Steel Thickness 1 1/2" Description of riveting: circum. seams Lap. S. Rivd. long. seams S.B.S. Y. Rivd.

Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 9 1/8" Lap of plates or width of butt straps 20 1/2"

Per centages of strength of longitudinal joint rivets 86.7 Working pressure of shell by rules 272 lbs Size of manhole in shell 16" x 12"

plate 85.4 Size of compensating ring 7" x 1 1/8" No. and Description of Furnaces in each boiler 3 - plain Material Steel Outside diameter 43 1/8"

Length of plain part top 3' 6" Thickness of plates crown 1 1/2" Description of longitudinal joint welded No. of strengthening rings one

bottom 1 1/2" Working pressure of furnace by the rules 170 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16"

Pitch of stays to ditto: Sides 8" Back 8 1/4" Top 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 161 lbs

Material of stays Steel Diameter 1.19" Area supported by each stay 59 1/2 sq" Working pressure by rules 160 lbs End plates in steam space:

Material Steel Thickness 1 1/8" Pitch of stays 16" How are stays secured S.N. & W. Working pressure by rules 162 lbs Material of stays Steel

Diameter 1.17" Area supported by each stay 25.6 sq" Working pressure by rules 167 lbs Material of Front plates at bottom Steel

Thickness 1 1/8" Material of Lower back plate Steel Thickness 1 1/8" Greatest pitch of stays 11 1/2" Working pressure of plate by rules 173 lbs

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" x 4 5/8" Material of tube plates Steel Thickness: Front 1 1/8" Back 1 1/8" Mean pitch of stays 9 3/8"

Pitch across wide water spaces 14" Working pressures by rules 172 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8" x 1 1/2"

Length as per rule 28 5/8" Distance apart 8" Number and pitch of Stays in each 2 - 8"

Working pressure by rules 195 lbs Superheater or Steam chest; how connected to boiler none 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



9910-595111

DONKEY BOILER— Description *vertical with three cross tubes*
 Made at *Kinghorn* By whom made *John Scott & Co* When made *9.8.95* Where fixed *Stokehold*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *367* Fire grate area *16 sq* Description of safety valves *Spring*
 No. of safety valves *2* Area of each *3.9 sq* Pressure to which they are adjusted *80 lbs* If fitted with easing gear *Yes* If steam from main boilers enter the donkey boiler *No* Diameter of donkey boiler *5' 6"* Length *11' 6"* Material of shell plates *Steel* Thickness *1/2"*
 Description of riveting long. seams *Lap, double jointed* Diameter of rivet holes *7/8"* Whether punched or drilled *drilled* Pitch of rivets *3"*
 Lap of plating *3 15/16"* Per centage of strength of joint Rivets *65.5* Plates *72.0* Thickness of shell crown plates *4/6"* Radius of do. *flat* No. of Stays to do. *8*
 Dia. of stays. *2 1/2"* Diameter of furnace Top *48"* Bottom *58"* Length of furnace *5 ft* Thickness of furnace plates *17/32"* Description of joint *welded* Thickness of furnace crown plates *11/16"* Stayed by *As above* Working pressure of shell by rules *110.*
 Working pressure of furnace by rules *80 lbs* Diameter of uptake *17"* Thickness of uptake plates *1/2"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *As per Rule & in addition a spare propeller shaft, propeller, valve spindle, air pump rod, eccentric strap & pair of main bearing bushes.*

The foregoing is a correct description,
John Scott & Co Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boilers of this vessel have been constructed under special survey. The materials & workmanship are good. The engines have been tried, & the safety valves of main and donkey boilers adjusted under steam, at the working pressures. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of + L.M.C. 10, 95. The approved boiler tracings are forwarded herewith.*

Large blue ink signature

It is submitted that this vessel is eligible for THE RECORD.

L.M.C. 10.95.
Pms.
24-10-95

Certificate (if required) to be sent to
 The amount of Entry Fee.. £ 2 :- :- When applied for,
 Special £ 19 : 10 :- 21.10.18.95
 Donkey Boiler Fee £ - :- :- When received,
 Travelling Expenses (if any) £ 3 : 1 : 6 24.10.18.95

FRI, 25 OCT 1895

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

Committee's Minute
 Assigned *+ L.M.C. 10, 95*

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