

REPORT ON MACHINERY.

No. 402

Received at Dundee Office **WEDNESDAY 20 JULY 1885**

No. in Survey held at Dunde & Arbroath Date, first Survey 2nd February Last Survey 8th July 1885
 Reg. Book. on the "Screw Lug Steamer Eagle" (Number of Visits) 208 Tons 25
 Master J. J. [Signature] Built at Dunde By whom built Pearce Bros. & Co. When built 1885
 Engines made at Arbroath By whom made A. Shank & Son when made 1885
 Boilers made at do By whom made do when made 1885
 Registered Horse Power 95 Owners Huddart Parker & Co Port belonging to Dundee

ENGINES, &c.—

Description of Engines Compound, surface condensing, direct acting, inverted cylinders.
 Diameter of Cylinders 23 1/2 x 47" Length of Stroke 27" No. of Rev. per minute 100 Point of Cut off, High Pressure .5 Low Pressure .5
 Diameter of Screw shaft 8 1/4 Diam. of Tunnel shaft 8 1/4 Diam. of Crank shaft journals 8 1/4 Diam. of Crank pin 8 1/4 size of Crank webs 10" x 6 1/4"
 Diameter of screw 9-5" Pitch of screw 13-9" No. of blades 3 state whether moveable yes total surface 24 1/2
 No. of Feed pumps 2 diameter of ditto 3 1/4 Stroke 13 1/2 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 diameter of ditto 3 1/4 Stroke 13 1/2 Can one be overhauled while the other is at work yes
 Where do they pump from Bilge sea & holdwell
 No. of Donkey Engines one Size of Pumps 4" Where do they pump from all compartments, sea & holdwell.
 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 yes
 No. of bilge injections one and sizes 1" Are they connected to condenser, or to circulating pump Circulating pump.
 How are the pumps worked Levers Circulating centrifugal by separate 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 none How are they protected —
 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 while building.
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from from main deck.

BOILERS, &c.—

Number of Boilers One Description Circular Multitubular Whether Steel or Iron Steel
 Working Pressure 100 lbs Tested by hydraulic pressure to 200 lbs Date of test 26/5/85
 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 72 1/2 Description of safety valves Spring No. to each boiler 2
 Area of each valve 12 1/2 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 6" Diameter of boilers 14'
 Length of boilers 10-6" description of riveting of shell long. seams St. riv. & salt straps circum. seams Lap dbl. riv. Thickness of shell plates 5/16
 Diameter of rivet holes 1 1/16 whether punched or drilled drilled pitch of rivets 4 1/2 Lap of plating 11 1/2
 Percentage of strength of longitudinal joint 73% working pressure of shell by rules 104 lbs size of manholes in shell 16" x 12"
 Size of compensating rings 3 1/2 x 3 1/2 x 3/4 No. of Furnaces in each boiler 3
 Outside diameter 44 1/2 length, top 7-6" bottom 9-9" thickness of plates 7/16 description of joint welded if rings are fitted corrugated
 Greatest length between rings — working pressure of furnace by the rules 112 lbs combustion chamber plating, thickness, sides 9/16 back 9/16 top 9/16
 Pitch of stays to ditto, sides 9 1/2 x 9" back 9" top 8 1/2 x 8" If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 113 Diameter of stays at smallest part 1 3/8 working pressure of ditto by rules 610 end plates in steam space, thickness 5/16
 Pitch of stays to ditto 14 x 16" how stays are secured thru side nuts working pressure by rules 115 lbs diameter of stays at smallest part 2 1/4 working pressure by rules 69 x 4 Front plates at bottom, thickness 5/8 Back plates, thickness 5/8
 Greatest pitch of stays 11 1/2 x 9" working pressure by rules 4392 Diameter of tubes 3 1/2 pitch of tubes 4 3/4 thickness of tube plates, front 3/4 back 3/4 how stayed stay tubes pitch of stays 16" width of water spaces 1 1/4
 Diameter of Superheater or Steam chest none 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

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 _____ materials _____

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:— *Half crank shaft, 3 propeller blades, propeller shaft, one set of top and one set of bottom end connecting rod bolts, one set of coupling bolts.*

The foregoing is a correct description,

A. Shanker & Co. Manufacturers

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been built under special Survey workmanship and materials good.

The approved tracings and steel test certificates are sent herewith.

The safety valves have been set under steam to a working pressure of 100 lbs per square inch.

It is submitted that this vessel is eligible to receive the inspection of LMC 7-85.

MP 22.7.85

The machinery of this vessel is now in good working order, and eligible, in my opinion, to be classed and marked, + LMC 7-85

The amount of Entry Fee .. £ 1 : 0 : 0 received by me,
 Special £ 14 : 5 : 0
 Donkey Boiler Fee £ : :
 Certificate (if required) .. £ : : 14th July 1885.
To be sent as per margin.
 (Travelling Expenses, if any, £ 1-1-0.)

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

Committee's Minute

TUESDAY 21 JULY 1885

