149

6557

REPORT ON MACHINERY.

No. 6557

Received at London Office Rec'd 12th JUNE, 1884

No. in Reg. Book. Survey held at Glasgow Date, first Survey May 18th 1883 Last Survey June 4th 1884

(Number of Visits 61)

on the Screw Steamer "Australasian" 3630·26 Tons 2343·04

Master A. Simpson Built at Glasgow By whom built R. Napier & Sons When built 1884

Engines made at Glasgow By whom made R. Napier & Sons when made 1884

Boilers made at " By whom made " " " when made 1884

Registered Horse Power 400 Owners George Thompson & Coy Port belonging to Aberdeen

ENGINES, &c.—

Description of Engines Inverted Expansion

Diameter of Cylinders 32" 46" 70 Length of Stroke 54" No. of Rev. per minute 65 Point of Cut off, High Pressure — Low Pressure —

Diameter of Screw shaft 15" Diam. of Tunnel shaft 13½" Diam. of Crank shaft journals 15" Diam. of Crank pin 14" size of Crank webs 8¾" × 4½"

Diameter of screw 17'-9" Pitch of screw 23'-6" No. of blades Four state whether moveable Yes total surface 85 ft

No. of Feed pumps Two diameter of ditto 5¼" Stroke 22" Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two diameter of ditto 5¼ Stroke 22" Can one be overhauled while the other is at work Yes

Where do they pump from All Compartments

No. of Donkey Engines One Size of Pumps 4½" × 9 Where do they pump from Sea & Bilges

Steed Engine 2 cylds 8½" dia 2 pumps double acting 6" × 10 stroke

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 Three and sizes 2-8"/1-5" Are they connected to condenser, or to circulating pump 8" to circulating pumps 6" to Air

How are the pumps worked By Levers

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 Main Steam & Winch pipes How are they protected Iron casing

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 May 21st 1884

[illegible]rew shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Upper platform

[illegible]RS, &c.—

[illegible]f Boilers Two Description Round double ended Whether Steel or Iron Steel

Pressure 125 lbs Tested by hydraulic pressure to — 250 lbs Date of test ~~May 21st~~ April 8th 1884

[illegible]n of ~~superheating apparatus~~ steam chest Round Longitudinal Receiver

[illegible] boiler be worked separately Yes Can the ~~superheater~~ Receiver be shut off and the boiler worked separately No

[illegible] square feet of fire grate surface in each boiler 125 ft. Description of safety valves Direct Spring No. to each boiler Two

[illegible]a of each valve 31·91" Are they fitted with easing gear Yes No. of safety valves to superheater One area of each valve 4"

Are they fitted with easing gear Yes Smallest distance between boilers and bunkers or woodwork 4 ft Diameter of boilers 14'-1"

Length of boilers 19'-6" description of riveting of shell long. seams Quadruple double straps circum. seams Double Riveted Thickness of shell plates 1 3/32"

Diameter of rivet holes 1 3/32" whether punched or drilled Drilled pitch of rivets 6 5/8" Lap of plating straps 20" × 1 3/32"

Per centage of strength of longitudinal joint 88% working pressure of shell by rules 144 lbs size of manholes in shell 16" × 12"

Size of compensating rings Doubling plate fitted No. of Furnaces in each boiler Six

Outside diameter 3'-10" length, top 7'-9 7/8 bottom — thickness of plates 9/16" description of joint Corrugated if rings are fitted —

Greatest length between rings — working pressure of furnace by the rules 130 lbs combustion chamber plating, thickness, sides 9/16" back — top 9/16"

Pitch of stays to ditto, sides 6¾ × 6¾ back — top 6¾" × 7½" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 134 lbs Diameter of stays at smallest part 1 3/8" Steel working pressure of ditto by rules 150 lbs end plates in steam space, thickness 15/16

Pitch of stays to ditto 15" × 15" how stays are secured By double nuts working pressure by rules 140 lbs diameter of stays at smallest part 2·18" working pressure by rules 146 lbs Front plates at bottom, thickness 14/16" Back plates, thickness —

Greatest pitch of stays — working pressure by rules — Diameter of tubes 3¾" pitch of tubes 4 15/16" thickness of tube plates, front 12/16" back 12/16" how stayed By tubes pitch of stays 10" × 14 13/16" width of water spaces 6½"

Diameter of ~~Superheater~~ Steam chest 2'-10" length 22 ft thickness of plates 9/16" description of longitudinal joint Lap diam. of rivet holes 13/16

Pitch of rivets 2½" working pressure of shell by rules 200 lbs 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 9/16" how stayed Spherical nearly

Superheater or steam chest; how connected to boiler By copper pipes

[Form No. 3000]

GLS149-0199

6557. Gls.

DONKEY BOILER— Description Round multitubular with through furnaces & brick Combustion Chamb
Made at Glasgow by whom made R. Napier & Sons when made 1884 where fixed On main Deck
Working pressure 125 lbs tested by hydraulic pressure to 250 lbs No. of Certificate 1385 fire grate area 27 ft description of safety valves Direct Spring No. of safety valves Two area of each 7" if fitted with easing gear Yes if steam from main boilers can enter the donkey boiler No diameter of donkey boiler 8 ft length 7 ft description of riveting Treble riveted double butt strap
Thickness of shell plates 10/16" diameter of rivet holes 17/16" whether punched or drilled Drilled pitch of rivets 3 10/16" lap of plating 14 x" Straps
per centage of strength of joint 80% thickness of End plates 14/16" stayed by Stays 2¼" dia 13" x 13" pitch
Diameter of furnace top 2' 6" bottom — length of furnace 7 ft thickness of plates 8/16" description of joint double butt straps fitted with two anti collapsing rings
Thickness of furnace plates 8/16" Tube plates 14/16" working pressure of shell by rules 140 lbs
Working pressure of furnace by rules 120 lbs taking 7 ft as length of furnace diameter of uptake — thickness of plates — thickness of water tubes —

SPARE GEAR. State the articles supplied :- 1 Length of Crank Shaft 1 Propeller Shaft & 4 Propeller blades. 1 Set Coupling bolts 1 Piston rod 1 pair of connecting rod brasses top & bottom & bolts, 2 main bearing bolts with nuts 1 Air pump rod, 1 Feed & Bilge pump plunger, Air, Feed & Circulating pump valves, 1 valve spindle with bushes, 4 rings for each piston valve, besides a considerable quantity of other gear

The foregoing is a correct description,

R. Napier & Sons. Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines & Boilers are of good workmanship & materials and are now in good order & safe working condition and eligible in my opinion to be noted in the Register Book ✠ Lloyds M.C. 6/84

The straight Shafting has been turned & finished by the Engineers Tracing of Boilers. Report on Crank Shaft and Steel plating herewith appended also Tracing of pumping arrangement

It is submitted that this vessel is eligible to have the notification ✠ Lm.C. 6.84 recorded
B.G. 12/6/84

The amount of Entry Fee	£ 3 : 0 : 0	received by me,
Special ..	£ 40 : 0 : 0	
Donkey Boiler Fee ..	£ 0 : 0 : 0	
Certificate (if required) .. To be sent as per margin.	£ 0 : 0 : 0	10/6/1884
(Travelling Expenses, if any, £ - 8/-		

James Mollison
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
Clyde District

Committee's Minute FRIDAY 13 JUNE 1884

✠ LMC

Robert Edmund Taylor & Son Printers, 19, Old Street, Goswell Road, London, E.C.