

REPORT ON MACHINERY.

Port of *Newcastle & Leith*

Received at London *WED. APR 9 1902*

No. in Survey held at *Leith* Date, first Survey *Aug 25 '99* Last Survey *June 19 1900*

Book. *on the S.S. "Abercrombie"* at *Leith* Aug 20 1900 (Number of Visits *23*) Gross *432.68* Net *162.17*

Master *W. Sinton* Built at *Sunderland* By whom built *Sunderland Shipbuilders Co* When built *1902*

Engines made at *Leith* By whom made *John Grant & Co* when made *1902*

Boilers made at *South Shields* By whom made *Jos. T. Eltringham & Co* when made *1900*

Registered Horse Power *67* Owners *Balgay Shipping Co (Ings)* Port belonging to *Sunderland*

Net Horse Power as per Section 28 *67* Is Refrigerating Machinery fitted *No* Is Electric Light fitted *No*

Engines, &c.—Description of Engines *Triple expansion* No. of Cylinders *3* No. of Cranks *3*

No. of Cylinders *13-21 1/2-35* Length of Stroke *24* Revs. per minute *110* Dia. of Screw shaft *7 1/4* Lgth. of stern bush *30*

No. of Tunnel shaft *6 3/4* Dia. of Crank shaft journals *6 3/4* Dia. of Crank pin *6 3/4* Size of Crank webs *13 1/2 x 5 1/4* Dia. of thrust shaft under

Revs *6 3/4* Dia. of screw *8' 6"* Pitch of screw *11' 0"* No. of blades *4* State whether moveable *No* Total surface *26 sq*

No. of Feed pumps *1* Diameter of ditto *2 3/4* Stroke *12* Can one be overhauled while the other is at work *Yes*

No. of Bilge pumps *1* Diameter of ditto *2 3/4* Stroke *12* Can one be overhauled while the other is at work *Yes*

No. of Donkey Engines *2* Sizes of Pumps *4 1/2 x 2 1/2 x 5 1/2 x 8 x 8* No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room *Two 2"* In Holds, &c. *Two 2"*

Bilge injections *1* sizes *3 1/2* Connected to condenser, or to circulating pump *Yes* Is a separate donkey suction fitted in Engine room & size *Yes 2"*

Are 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 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*

Are pipes carried through the bunkers *Suctions to hold* 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*

Were stern tube, propeller, screw shaft, and all connections examined in dry dock *Yes* Is the screw shaft tunnel watertight *None*

Is it fitted with a watertight door *Yes* worked from *Yes*

Boilers, &c.—(Letter for record *S*) Total Heating Surface of Boilers *1073 sq* Is forced draft fitted *No*

Description of Boilers *One Single ended Multitubular* Working Pressure *180* Tested by hydraulic pressure to *360*

Can each boiler be worked separately *Yes* Area of fire grate in each boiler *34 sq* No. and Description of safety valves to *1*

Area of each valve *4.90* Pressure to which they are adjusted *185 lbs* Are they fitted with easing gear *Yes*

Distance between boilers or uptakes and bunkers on woodwork *6 ft* Mean dia. of boilers *11-11"* Length *9-10* Material of shell plates *S*

Range of tensile strength *27/32* Are they welded or flanged *No* Descrip. of riveting: cir. seams *Lap J.R.* long. seams *J.B. 3.R.*

Range of rivet holes in long. seams *1 1/4"* Pitch of rivets *7"* Lap of plates or width of butt straps *17 1/2"*

Stages of strength of longitudinal joint rivets *89* Working pressure of shell by rules *210* Size of manhole in shell *16 x 12*

Compensating ring *7 1/2 x 13/16* No. and Description of Furnaces in each boiler *2 Horizontal* Material *S* Outside diameter *46 1/2 x 42 1/2*

Top *9"* Thickness of plates *23/32* Description of longitudinal joint *Weld* No. of strengthening rings *Yes*

Working pressure of furnace by the rules *210* Combustion chamber plates: Material *S* Thickness: Sides *1/16"* Back *1/16"* Top *1/16"* Bottom *1"*

Stays to ditto: Sides *9 1/4 x 8 1/2* Buck *9 x 8* Top *8 3/4 x 8 1/4* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *208*

Material of stays *S* Diameter at smallest part *1 1/8* Area supported by each stay *72* Working pressure by rules *246* End plates in steam space: *Yes*

Material *S* Thickness *1/16"* Pitch of stays *15 x 14 3/4* How are stays secured *DN + W* Working pressure by rules *236* Material of stays *S*

Area supported by each stay *221* Working pressure by rules *207* Material of Front plates at bottom *S*

Material of Lower back plate *S* Thickness *27/32* Greatest pitch of stays *14"* Working pressure of plate by rules *206*

Diameter of tubes *3 1/4* Pitch of tubes *4 1/2 x 4 1/2* Material of tube plates *S* Thickness: Front *1/16"* Back *27/32* Mean pitch of stays *13 1/2*

Chamber across wide water spaces *14"* Working pressures by rules *207* Girders to Chamber tops: Material *S* Depth and

Thickness of girder at centre *6 x 2 x 1 1/8* Length as per rule *2-6* Distance apart *8 1/4* Number and pitch of Stays in each *2 x 8 3/4*

Working pressure by rules *216* Superheater or Steam chest; how connected to boiler *Can the superheater be shut off and the boiler worked*

Material of stays *S* Diameter *1 1/8* Length *1 1/8* Thickness of shell plates *S* Material *S* Description of longitudinal joint *Weld* Diam. of rivet

Pitch of rivets *7"* Working pressure of shell by rules *210* Diameter of flue *S* Material of flue plates *S* Thickness *2019*

Stiffened with rings *Yes* Distance between rings *20* Working pressure by rules *206* End plates: Thickness *1 1/8* How stayed *Yes*

Working pressure of end plates *206* Area of safety valves to superheater *Yes* Are they fitted with easing gear *Yes*

W498-0259

Working pressure of furnace by rules 109 lbs Diameter of uptake 12 Thickness of uptake 1/2

SPARE GEAR. State the articles supplied:— Two top end, two bottom end, two main-bearing, & nuts, a set of coupling bolts, a set of feed & bilge pump valves, a main safety valve spring, a quantity of assorted bolts & nuts & rivets.

Manufacturers & Signers John Brantley

The foregoing is a correct copy
 of
 Jos. T. Ellingham Treas.
 Reading Dec 2

Manufacturers of Books -

General Remarks

General Remarks (State quality of workmanship, opinions as to class, &c.)
This boiler has been built under special survey. The material and workmanship being good & efficient, has been tested to double the working pressure and found in every respect satisfactory. Is eligible in my opinion to be
Classed -

The engines of this vessel have been constructed under special survey & the materials & workmanship are found to be good. The engines have been tried under steam & the safety valves, main & donkey boilers adjusted at the working pressures. The machinery is now in good & safe working condition eligible in my opinion to have the notation of **+LMC 3,02**

It is submitted that
this vessel is eligible for
THE RECORD - LMC 3,02

The amount of Entry Fee. £ 1 0 0 } applied for 25/3/02
 Special *Engines* £ 6 10 0 } When applied for, 31/3/02
Boiler £ 3 11 0 } received 14 AUG 1900
 Donker Boiler Fee. . . . £ 2 2 4 } applied for 13/3/02
 Travelling Expenses (if any) £ - - - } When received, 31st March 1902

Committee's Minute
Assigned

TUES. 15 APL 1902

1 L.H.B. 3.02

FRI. 9 MAY 1902

FRI. FEB. 21. 1913

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