

The words FORGINGS or CASTINGS, IRON or STEEL, should be struck out as may be required.

Received at Belfast Office, 13 Dec. 1886.

# Lloyd's Register of British and Foreign Shipping.

(Report on Vessel No. \_\_\_\_\_ Port S.S. "Kathleen," Belfast Report  
N<sup>o</sup> 3312.)

No. 1304

## SHIP FORGINGS OR CASTINGS.

I have to report that the undermentioned Iron ~~or Steel~~ Forgings ~~or Castings~~, manufactured by  
The Portland Forge Co of Kilmarnock.  
for the Vessel No. 45, being built by Messrs Workman, Clark & Co  
of Belfast, have been inspected by me as set forth below, and found  
to be, so far as can be seen, sound and efficient.

Mark on Forgings.

Lloyd's

No. 1304

G. N.

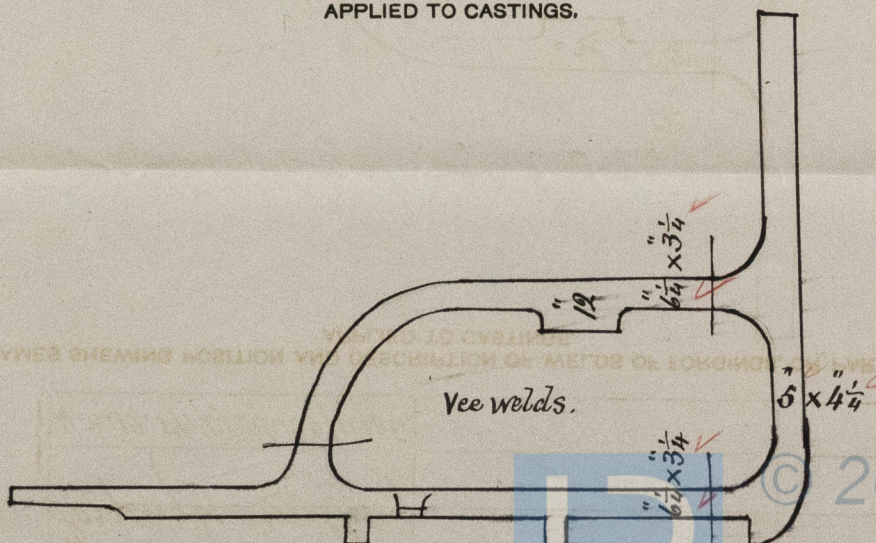
George Newcomb.

Glasgow

11/12/86.

	STERN FRAME.	RUDDER FRAME.	STEM.
Material* - - - -	<u>Scrap iron</u>		
How made - - - -	<u>Forgeel</u>		
Dimensions - - - -	<u>6 1/4 x 3 1/4</u>		
Progress on Inspection -	<u>Forging &amp; smithing</u>		
Dates when Inspected	<u>4.8.12.17.22.26.30/11/86.</u>		

SKETCHES OF FRAMES SHEWING POSITION AND DESCRIPTION OF WELDS OF FORGINGS, OR PARTICULARS OF TESTS APPLIED TO CASTINGS.





# REPORT ON MACHINERY.

3307

No. 3307

Received at London **WEDNES. 6 APRIL 1887**

No. in Survey held at Belfast Date, first Survey 8<sup>th</sup> April 1886 Last Survey 4<sup>th</sup> April 1887

Reg. Book.

23<sup>rd</sup> Sept the Steel Screw Steamer "Otolia" (Number of Visits 59)  
 Master W. Gill Built at Belfast By whom built Harland & Wolff When built 1886 & 7  
 Engines made at Belfast By whom made Harland & Wolff when made 1886 & 7  
 Boilers made at Belfast By whom made Harland & Wolff when made 1886 & 7  
 Registered Horse Power 320 Owners City of Liverpool S.N. Co. Port belonging to Liverpool

## ENGINES, &c.—

Description of Engines Triple Expansion Inv. D.A. Sur. Cond., Three Cranks  
 Diameter of Cylinders 24 $\frac{1}{2}$  37 64 Length of Stroke 48 No. of Rev. per minute 65 Point of Cut off, High Pressure 36 $\frac{1}{2}$  Low Pressure 6 28 $\frac{1}{2}$   
 Diameter of Screw shaft 13 $\frac{1}{4}$  Diam. of Tunnel shaft 12 $\frac{1}{4}$  Diam. of Crank shaft journals 13 $\frac{1}{4}$  Diam. of Crank pin 13 $\frac{1}{2}$  size of Crank webs 18 $\frac{1}{2}$  x 10" Cast  
 Diameter of screw 16-6" Pitch of screw 16-3" at root inc. to 7 ft. 11 in. 19-0" from 8 ft. 6 in. to tip No. of blades four state whether moveable yes total surface 71.2 Sq. ft.  
 No. of Feed pumps Two diameter of ditto 8 $\frac{1}{2}$ " Stroke 28" Can one be overhauled while the other is at work yes  
 No. of Bilge pumps Two diameter of ditto 4" Stroke 28" Can one be overhauled while the other is at work yes  
 Where do they pump from Hotwell All bilges in holds & Machinery Spaces  
 No. of Donkey Engines Three Size of Pumps Ballast tank 10 dia. 10 ft. 10 dia. 10 ft. 6" Where do they pump from Sea, Ballast tanks, Hotwell, all bilges, distiller boilers & exhaust tank  
 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 5 dia Are they connected to condenser, or to circulating pump circulating pump  
 How are the pumps worked from the two after engines by levers & links  
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Cocks & Valves  
 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 below  
 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  
 What pipes are carried through the bunkers back discharge How are they protected boxed in with wood  
 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 by non-return valves  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock 5<sup>th</sup> Jan 76 before launching  
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from upper deck

## BOILERS, &c.—

Number of Boilers Two Description circul. 6' 6" dia. multitubular Whether Steel or Iron Steel (Siemens)  
 Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 22<sup>nd</sup> Feb. 1887. No 14  
 Description of superheating apparatus or steam chest none fitted  
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately yes  
 No. of square feet of fire grate surface in each boiler 74.25 Description of safety valves Cockburn's Spring each boiler Two  
 Area of each valve 9.62 Are they fitted with easing gear yes No. of safety valves to superheater 1 area of each valve 1  
 Are they fitted with easing gear yes Smallest distance between boilers and bunkers or woodwork 12 $\frac{1}{2}$  Diameter of boilers 11-9"  
 Length of boilers 17-0" description of riveting of shell long. seams Triple & double circum. seams Triple & double Thickness of shell plates 1 $\frac{1}{16}$   
 Diameter of rivet holes 1 $\frac{1}{8}$ " whether punched or drilled drilled pitch of rivets 6.75 Lap of plating Straps 18 $\frac{1}{2}$  x 1 $\frac{1}{2}$  each  
 Percentage of strength of longitudinal joint 83 + 82.5 working pressure of shell by rules 161.5 lbs size of manholes in shell 15" x 12"  
 Size of compensating rings rectangular plate 27" x 24 $\frac{1}{2}$  x 1" steel No. of Furnaces in each boiler Four  
 Outside diameter 3-7" length, top 6-11" bottom 6-11" thickness of plates 9 $\frac{1}{16}$ " description of joint Loose Corrugated rings are fitted 3 angles  
 Greatest length between rings 163 lbs working pressure of furnace by the rules 163 lbs combustion chamber plating, thickness, sides 9 $\frac{1}{16}$  bot 5" top 9 $\frac{1}{16}$   
 Pitch of stays to ditto, sides 7 $\frac{1}{2}$  x 7 $\frac{1}{2}$ " back yes top 7 $\frac{1}{2}$  x 7 $\frac{1}{2}$ " If stays are fitted with nuts or riveted heads nutted working pressure of plating by rules 185 lbs  
 Diameter of stays at smallest part 1 $\frac{1}{4}$ " full working pressure of ditto by rules 175.7 lbs and plates in steam space, thickness 7 $\frac{1}{8}$ "  
 Pitch of stays to ditto 16" x 14" how stays are secured double nuts working pressure by rules 153 with 200 tons diameter of stays at smallest part 23 $\frac{1}{2}$ " working pressure by rules 160 Front plates at bottom, thickness 13 $\frac{1}{16}$  Back plates, thickness yes  
 Greatest pitch of stays yes working pressure by rules yes Diameter of tubes 8 $\frac{1}{4}$ " 7203 pitch of tubes 4 $\frac{1}{16}$  x 4 $\frac{1}{16}$ " thickness of tube 65 lbs boxes and shell  
 plates, front 7 $\frac{1}{8}$ " back 25 $\frac{1}{32}$ " how stayed stay tubes pitch of stays 9 $\frac{1}{2}$  x 9 $\frac{1}{2}$ " width of water spaces 6" between boxes  
 Diameter of Superheater or Steam chest yes length yes thickness of plates yes description of longitudinal joint yes diam. of rivet holes yes  
 Pitch of rivets yes working pressure of shell by rules yes diameter of flue yes thickness of plates yes If stiffened with rings yes  
 Distance between rings yes working pressure by rules yes end plates of superheater, or steam chest; thickness yes how stayed yes  
 Superheater or steam chest; how connected to boiler yes

BELSH-0059

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