

Lloyd's Register of British and Foreign Shipping.

(Report on Vessel No. _____ Port _____)

S.S. "Kattileu," Belfast Report
N^o 3312.

No. 1304 **SHIP FORGINGS OR CASTINGS.**

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

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

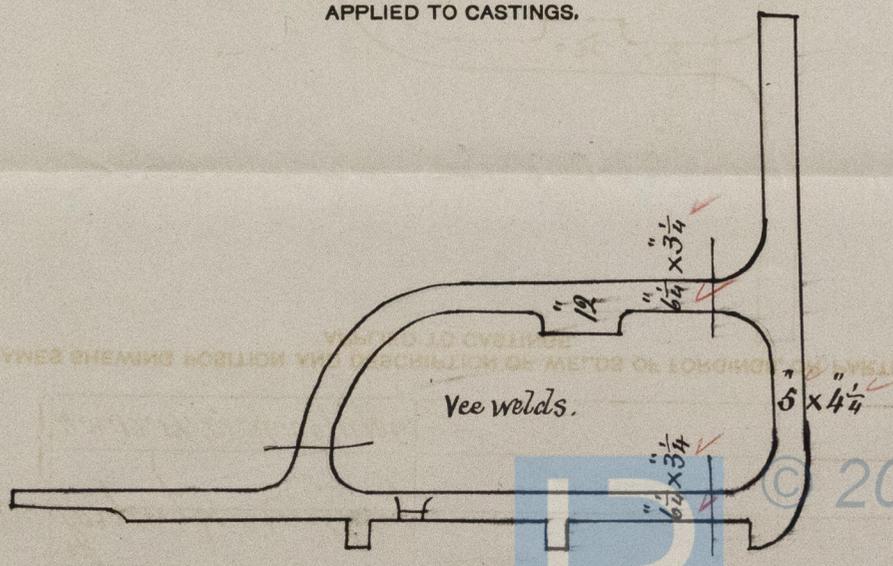
Mark on Forgings.

Lloyd's
No. 1304
G. N.

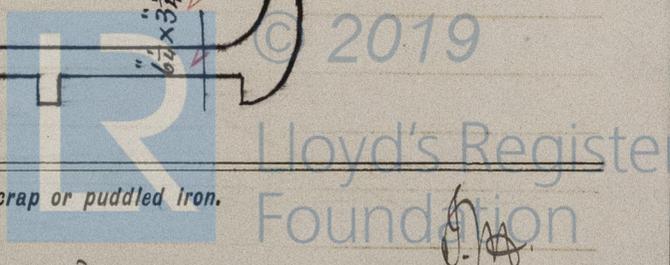
George Newcomb.
Glasgow 11/12/86.

	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 & 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.



* If of Iron, state whether scrap or puddled iron.



REPORT ON MACHINERY.

3307

No. 3307

Received at London WEDNES. 6 APRIL 1887

No. in Survey held at Belfast
Reg. Book.

Date, first Survey 8th April 1886 Last Survey 4th April 1887

(Number of Visits 59)

23 in Screw the Steel Screw Steamer "Otolia" Tons 3139.358
 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

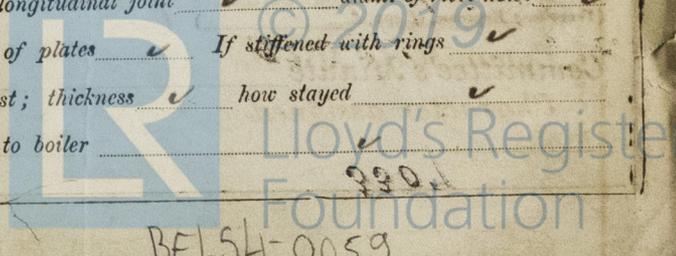
ENGINES, &c.—

Description of Engines Triple Expansion Inv. D.A. Sur. Cond., Three Cranks
 Diameter of Cylinders 24 1/2, 37, 60 Length of Stroke 48 No. of Rev. per minute 65 Point of Cut off, High Pressure 3/8 Low Pressure 1/2
 Diameter of Screw shaft 13 1/4 Diam. of Tunnel shaft 12 1/4 Diam. of Crank shaft journals 13 1/4 Diam. of Crank pin 13 1/2 size of Crank webs 18 1/2 x 10 Cast
 Diameter of screw 16-6 Pitch of screw 1/6-3 at root inc. to 7 1/4" No. of blades four state whether moveable yes total surface 71.2 Sq. ft.
 No. of Feed pumps Two diameter of ditto 8 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 10 dia. 10 dia. 10 dia. 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 5th 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 circular, 6' dia. ended, multitubular Whether Steel or Iron Steel (Siemens)
 Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 22nd 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 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 1/16
 Diameter of rivet holes 1 1/8" whether punched or drilled drilled pitch of rivets 6.75 Lap of plating Straps 18 1/2 x 1 1/2
 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 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 9/16 description of joint Loose Corrugated Rings are fitted 3 angles
 Greatest length between rings 163 working pressure of furnace by the rules 163 lbs combustion chamber plating, thickness, sides 9/16 bot 5/8 top 9/16
 Pitch of stays to ditto, sides 7 1/2 x 7 1/2 back 7 1/2 x 7 1/2 top 7 1/2 x 7 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 1/2 full 1 1/2 working pressure of ditto by rules 175.7 lbs and plates in steam space, thickness 7/8"
 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 1/2 working pressure by rules 160 Front plates at bottom, thickness 13/16 Back plates, thickness 1/2"
 Greatest pitch of stays 1/8 working pressure by rules 160 Diameter of tubes 3 1/4" 7203. pitch of tubes 4 1/2" x 4 1/2" thickness of tube
 plates, front 7/8 back 35/32 how stayed stay tubes pitch of stays 9 1/2 x 9 1/2 width of water spaces 6" between boxes 1 1/2"
 Diameter of Superheater or Steam chest 16 length 16 thickness of plates 1/2 description of longitudinal joint butt diam. of rivet holes 1 1/8"
 Pitch of rivets 1/8 working pressure of shell by rules 160 diameter of flue 16 thickness of plates 1/2 If stiffened with rings yes
 Distance between rings 16 working pressure by rules 160 end plates of superheater, or steam chest; thickness 1/2 how stayed yes
 Superheater or steam chest; how connected to boiler yes

Comb. iron girders each 2 iron plates 9 x 2



BEL54-0059