

REPORT ON MACHINERY.

No. 13524

No. in Survey held at Sunderland
Reg. Book.

Received at London Office THURSDAY 25 SEPT 1884
Date, first Survey March 25th Last Survey Sept 23rd 1884

on the Screw Steamer "CLONGURRY." (Number of Visits 48)

Master J. Lawson Built at Sunderland By whom built W. Dafford & Sons When built 1884

Engines made at Sunderland By whom made W. Dafford & Sons when made 1884

Boilers made at Do By whom made Do when made 1884

Registered Horse Power 260 Owners M^r Elvraith M^r Lachan & Co Port belonging to London

ENGINES, &c.—

Description of Engines Inverted Compound, Surface Condensing
Diameter of Cylinders 35" & 70" Length of Stroke 48" No. of Rev. per minute 60 Point of Cut off, High Pressure 2 stroke Low Pressure 2 stroke
Diameter of Screw shaft 13" Diam. of Tunnel shaft 12 1/4" Diam. of Crank shaft journals 13" Diam. of Crank pin 13" size of Crank webs 15 1/2" x 9 1/2"
Diameter of screw 16 9/16" Pitch of screw 19 1/2" No. of blades 4 state whether moveable no total surface 75 sq feet
No. of Feed pumps 2 diameter of ditto 3 3/4" Stroke 32" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 diameter of ditto 3 3/4" Stroke 32" Can one be overhauled while the other is at work yes
Where do they pump from Engine room bilges. After well & connected to all parts.
No. of Donkey Engines 2 Size of Pumps 4 dia x 8 stroke & 8 x 10 Where do they pump from Engine room bilges After well Ballast tanks. Hold. Sea & Landman. Feed donkey the same and hot well
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 1 and sizes 5 dia Are they connected to condenser, or to circulating pump to Circulating pump
How are the pumps worked by levers from the piston rod Crosshead of the after 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 except discharge from fresh water condenser.
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 Air pipe from ballast tanks How are they protected None coming
Are air 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 from time 23. 9. 84
Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Top platform

BOILERS, &c.—

Number of Boilers 2 Description Cyl. Mult- double ended Whether Steel or Iron Steel
Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test 19. 7. 84
Description of superheating apparatus or steam chest Horizontal dome.
Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately no superheater
No. of square feet of fire grate surface in each boiler 65 Description of safety valves Adams patent No. to each boiler 2
Area of each valve 15.9 sq in. 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 4" Diameter of boilers 11.6"
Length of boilers 17.3" description of riveting of shell long. seams double riv- lap circum. seams double riv- lap Thickness of shell plates 7/16"
Diameter of rivet holes 1 1/16" whether punched or drilled drilled pitch of rivets 3 3/4" Lap of plating 7"
Per centage of strength of longitudinal joint 716 working pressure of shell by rules 82 lbs size of manholes in shell 16" x 12"
Size of compensating rings 6" x 3/4" No. of Furnaces in each boiler 4
Outside diameter 3.0" length, top 6.0" bottom 6.0" thickness of plates 1/2" description of joint double butt & single end If rings are fitted on bottom
Greatest length between rings 6.0" working pressure of furnace by the rules 103 lbs combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"
Pitch of stays to ditto, sides 9 x 7" back 8 3/4 x 8 1/2" top 9 x 7" If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 95 lbs Diameter of stays at smallest part 1 3/8" working pressure of ditto by rules 140 lbs end plates in steam space, thickness 7/8"
Pitch of stays to ditto 18" x 17 1/2" how stays are secured w/ washers & nuts working pressure by rules 94 lbs diameter of stays at smallest part 2 1/2" working pressure by rules 93 lbs Front plates at bottom, thickness 1/2" Back plates, thickness —
Greatest pitch of stays — working pressure by rules — Diameter of tubes 3 1/2" pitch of tubes 4 3/4" x 4 3/4" thickness of tube plates, front 3/4" back 3/4" how stayed stay tube pitch of stays 14 1/2" x 9 1/2" width of water spaces 1 1/4"
Diameter of Superheater or Steam chest 3.0" length 12.0" thickness of plates 7/16" description of longitudinal joint double riv- lap diam. of rivet holes 13/16"
Pitch of rivets 2 3/4" working pressure of shell by rules 177 lbs diameter of flue none thickness of plates — If stiffened with rings —
Distance between rings — working pressure by rules — end plates of superheater, or steam chest; thickness 3/4" how stayed one stay 2 1/2" dia
~~Superheater or steam chest; how connected to boiler by 2 neck pieces~~

SL8950 - 0014

DONKEY BOILER— Description *Vertical and water tubes*
Made at *Cunderland* by whom made *Welford Brothers* when made *1884* where fixed *Upper deck*
Working pressure *70 lb* tested by hydraulic pressure to *160 lb* No. of Certificate *764* fire grate area *520 sq ft* description of safety
valves *Spring* No. of safety valves *2* area of each *8.3* if fitted with easing gear *Yes* if steam from main boilers can
enter the donkey boiler *No* diameter of donkey boiler *7.6* length *14.0* description of riveting *Lap joint riv, in vertical*
Thickness of shell plates *1/2* diameter of rivet holes *1* whether punched or drilled *P* pitch of rivets *3 1/4* lap of plating *4 1/2*
per centage of strength of joint *69* thickness of crown plates *1/2* stayed by *Diagonal + 12 stays 1 1/4 diameter*
Diameter of furnace, top *5.6* bottom *6.6* length of furnace *6.6* thickness of plates *9/16* description of joint *Lap joint riv*
Thickness of furnace crown plates *9/16* stayed by *Same as above* working pressure of shell by rules *86 lb*
Working pressure of furnace by rules *66 lb + 8 lb* diameter of uptake *20* thickness of plates *7/16* thickness of water tubes *5/8*

SPARE GEAR. State the articles supplied:— *Propeller, 2 top and bottom end bolts + nuts*
2 main bearing bolts and nuts, set of coupling bolt, 2 bottom end frames, spare
set of feed and bilge pump valves, safety valve spring, 1 piston spring
Spare iron + bolts &c

The foregoing is a correct description,
William Duffell & Co. Manufacturer of main engine and boilers.

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

The machinery of this vessel has been constructed under special survey the materials and workmanship are good and efficient.

The engines and boilers have been tried under steam and found satisfactory, and in my opinion they are in good order and safe working condition, and eligible for the distinguishing mark in the Register Book of L.M.C. 984

It is submitted that this vessel is eligible to have the notification + Imb 984 recorded.

B. 25/9/84

The amount of Entry Fee £ 2 : 0 : 0 received by me,
Special .. £ ~~32~~ 10 : 0
Donkey Boiler Fee .. £ 33 : 0 : 0
Certificate (if required) .. £ : : *15/9/9/1884*
To be sent as per margin.

(Travelling Expenses, if any, £ ..)

Committee's Minute

FRI 13 NOV 1891

FRIDAY 26 SEPT 1884 FRI. 16 OCT 1891

William Allison & Geo. A. Milner
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.