

REPORT ON MACHINERY.

Port of *Belfast*

MON 10 NOV 1890

No. 3809

No. in Survey held at *Belfast*

Reg. Book.

Date, first Survey *June 24* Last Survey *Nov 4th* 1890

Received at London Office

13

(Number of Visits 19)

on the steel S. S. *Susannah Kelly*

Master *W. Watson* Built at *Belfast* By whom built *MacIlwaine & MacColl* (When built 1890

Engines made at *Belfast* By whom made *MacIlwaine & MacColl* when made 1890

Boilers made at *Belfast* By whom made *MacIlwaine & MacColl* when made 1890

Registered Horse Power *48* Owners *John Kelly* Port belonging to *Belfast*

ENGINES, &c.—

Description of Engines *Tri-compound S.I.S.C. 3 cranks* No. of Cylinders *Three*

Diam. of Cylinders *12" 19" 31"* Length of Stroke *30"* Rev. per minute *110* Point of Cut off, High Pressure *50.8* Low Pressure *50.4*

Diameter of Screw shaft *6 1/2"* Diam. of Tunnel shaft *none* Diam. of Crank shaft journals *6 1/2"* Diam. of Crank pin *6 1/2"* size of Crank webs *8" x 4"*

Diameter of screw *9 ft.* Pitch of screw *11'-3"* No. of blades *4* state whether moveable *yes* total surface *28 sq ft.*

No. of Feed pumps *one* diameter of ditto *2 1/2"* Stroke *13* Can one be overhauled while the other is at work *—*

No. of Bilge pumps *one* diameter of ditto *3* Stroke *13* Can one be overhauled while the other is at work *—*

Where do they pump from *From the bilges in E. & B. space & from the holds*

No. of Donkey Engines *one* Size of Pumps *3" dia x 6" stroke* Where do they pump from *Sea, bilges, tanks & holds Centrifugal Pump from sea & tanks.*

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 *—* Are they connected to condenser, or to circulating pump *circulating pumps*

How are the pumps worked *by links & levers from I.P. engine cross lead, separate engine for centrifugal circulating pumps.*

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 *—*

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 *none* How are they protected *—*

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 *—*

Is the screw shaft tunnel watertight *none* and fitted with a sluice door *—* worked from *—*

BOILERS, &c.—

No. of Boilers *one* Description *Multi-Single ended Gir.* Material *Steel* Letter (for record) *—*

Working Pressure *160 lbs* Tested by hydraulic pressure to *820* Date of test *Oct 16th 1890*

Description of superheating apparatus or steam chest *—*

Can each boiler be worked separately *—* Can the superheater be shut off and the boiler worked separately *—*

Area of square feet of fire grate surface in each boiler *29.7* Description of safety valves *Cockburn's* No. to each boiler *two*

Area of each valve *3.9460"* 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 *—* Diameter of boilers *10.4"*

Length of boilers *6.9"* description of riveting of shell long. seams *treble, butt shape circum.* seams *top 1/2 double* Thickness of shell plates *27/32*

Diameter of rivet holes *7/8* whether punched or drilled *drilled* pitch of rivets *8.2955"* Lap of plating *4 1/2" x 6"*

Percentage of strength of longitudinal joint *89.4* working pressure of shell by rules *159* size of manholes *in shell 16" x 12"*

No. of compensating rings *none* No. of Furnaces in each boiler *two* Description of Furnaces *plain with Adamson's rings*

Outside diameter *2.11"* length between rings *3.53" x 3.23"* thickness of plates *7/16* description of joint *welded* if rings are fitted *yes*

Greatest length between rings *3.53"* working pressure of furnace by the rules *177* combustion chamber plating, thickness, sides *7/16* back *7/16* top *7/16*

Each of stays to ditto, sides *7 3/4* back *7 3/4* top *7 3/4* If stays are fitted with nuts or riveted heads *rivetted over a steel* working pressure of plating by

rules *162* Diameter of stays at smallest part *1 1/4"* working pressure of ditto by rules *164* end plates in steam space, thickness *7/16 doubled*

Each of stays to ditto *14" x 15 1/2"* how stays are secured *double nuts* working pressure by rules *160.2* diameter of stays at

smallest part *2 3/8"* working pressure by rules *160.2* Front plates at bottom, thickness *7/8* Back plates, thickness *7/8 doubled*

Greatest pitch of stays *7 3/4"* working pressure by rules *167* Diameter of tubes *3 1/4"* pitch of tubes *4 1/2"* thickness of tube

plates, front *11/16"* back *11/16"* how stayed *stay tubes* pitch of stays *9" x 13 1/2"* width of water spaces *10 1/2" x 9 1/2"*

Diameter of Superheater or Steam chest *—* length *—* thickness of plates *—* description of longitudinal joint *—* diam. of rivet holes *—*

Each of rivets *—* working pressure of shell by rules *—* 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 *—* how stayed *—*

Superheater or steam chest; how connected to boiler *—*

1100-85738

DONKEY BOILER— Description *Cir. single ended multitubular horizontal steel with one furnace*
Made at *Belfast* by whom made *MacIlwaine & MacColl* when made *1890* where fixed on *R.A.D. over M. boiler*
Working pressure *60 lbs* tested by hydraulic pressure to *120 lbs* No. of Certificate *94* fire grate area *8.5* description of safety
valves *D. Crebburn's* No. of safety valves *two* area of each *3.140* if fitted with easing gear *yes* if steam from main boilers can
enter the donkey boiler *No* diameter of donkey boiler *5.6* length *6.6* description of riveting *lap & double riveted*
Thickness of shell plates *3/8* diameter of rivet holes *1/6* whether punched or drilled *drilled* pitch of rivets *2.25* lap of plating *4*
per centage of strength of joint *69* thickness of ^{end} ~~cross~~ plates *1/2* stayed by *1 1/2* steel stays *12* pitch *washers 7/8 dia & 1/2 thick*
Diameter of furnace, ^{top} *24 3/4* bottom *✓* length of furnace *4.25 ft* thickness of plates *3/8* description of joint *welded*
Thickness of ~~furnace~~ ^{c.c. top} plates *25/32* stayed by *✓* working pressure of shell by rules *66.6*
Working pressure of furnace by rules *108* diameter of uptake *✓* thickness of plates *✓* thickness of water tubes *✓*

SPARE GEAR. State the articles supplied:— *2 top end bolts, 2 bottom end bolts 2 M. bearings*
bolts 1 set of coupling bolts 1 set of feed & bilge pump valves, bolts &
nuts & iron of various sizes

The foregoing is a correct description,

MAGILWAINE & MACCOLL, LIMITED. Manufacturers.

MacColl

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel*)
has been constructed in accordance with the approved plans
of main & donkey & to the Rules of the Society & also to the
satisfaction of the undersigned.
The main & auxiliary boilers & the main steam pipe
have been tested in accordance with the Rules & shewed
no signs of leakage or weakness, the boilers have also
been tried under steam & the safety valves set to
160 + 5 lbs & 60 + lbs respectively.
The shafting has been examined when finished & found
free from visible defects.
The whole of the material used in the construction
of the machinery & the workmanship throughout are good
& satisfactory & I recommend the notification L.M.C.
granted & recorded in the Register Book.

It is submitted that this vessel is eligible
to have + L.M.C. 11-90 *recorded,*

Machinery Certificate
Written.

The amount of Entry Fee .. £ *1 : 0* : *not received by me,*

Special £ *8 : 11* :

Donkey Boiler Fee £ :

Certificate (if required) .. £ :

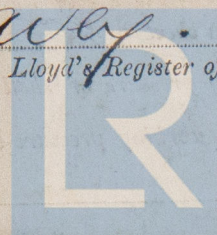
To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute **TUES 18 NOV. 1890**

+ Lm 61/90

W. M. Davey
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



Lloyd's Register
Foundation