

REPORT ON MACHINERY.

No. 17171

Port of Sunderland.

2 DEC 1893

Received at London Office

No. in Survey held at Sunderland.
Reg. Book.

Date, first Survey 6th June/93 Last Survey Nov^r 22nd 1893

(Number of Visits) 32

on the S/S. "Mim"

Tons { Gross 919.64
Net 564.38

Master W. Crosby. Built at Sunderland By whom built Strand Slipway Co^r

When built 1893.

Engines made at Sunderland By whom made N. E. M. Eng Co^r Ltd

when made 1893.

Boilers made at Sunderland By whom made N. E. M. Eng Co^r Ltd

when made 1893.

Registered Horse Power 99 106 HP Owners Ferwick, Stobart Co^r

Port belonging to London.

Nom. Horse Power as per Section 28 120 see R

ENGINES, &c. — Description of Engines Tri compound, 3 crank S. No. of Cylinders 3.

Diameter of Cylinders 14" 28" 46" Length of Stroke 30" Revolutions per minute 70 Diameter of Screw shaft 8.32"
as per rule 7.58" as fitted 8.5"

Diameter of Tunnel shaft 8.8" Diameter of Crank shaft journals 8.2" Diameter of Crank pin 8.2" Size of Crank webs 5 3/4" x 12 1/2"

Diameter of screw 12 feet Pitch of screw 13' 4 1/2" No. of blades 4 State whether moveable f. Total surface 44 f.

No. of Feed pumps 2 Diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work yes.

No. of Bilge pumps 2 Diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work yes.

No. of Donkey Engines 2 Sizes of Pumps 6" x 9" + 5 1/2" x 3 1/2" x 5 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 6 3" C 3" P 3" In Holds, &c. 2 of 3" to No. 1 hold. 2 of 3" to

after hold 1 of 2 1/2" to after well.

No. of bilge injections 1 sizes 4" Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size yes 4"

Are all 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 yes.

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

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 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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock new vessel Is the screw shaft tunnel watertight yes

Is it fitted with a watertight door yes. worked from top platform

BOILERS, &c. — (Letter for record S.) Total Heating Surface of Boilers 1870 f.

No. and Description of Boilers 1 Cylindrical multitubular Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs.

Date of test 14/9/93 Can each boiler be worked separately — Area of fire grate in each boiler 42 f. No. and Description of safety valves to
each boiler Spring 2 valves. Area of each valve 7.070 Pressure to which they are adjusted 165 lbs. Are they fitted
with easing gear yes. Smallest distance between boilers or uptakes and bunkers or woodwork 14" Mean diameter of boilers 14 feet

Length 10 feet. Material of shell plates S Thickness 1 1/32" Description of riveting: circum. seams d. r. lap. long. seams T. r. butt.

Diameter of rivet holes in long. seams 18" Pitch of rivets 7" Lap of plates or width of butt straps 16 1/2"

Per centages of strength of longitudinal joint
rivets 86.6 Working pressure of shell by rules 166 lbs Size of manhole in shell 16" x 12"
plate 83.9

Size of compensating ring 8" x 1 1/32" No. and Description of Furnaces in each boiler 3 plain Material S. Outside diameter 39"

Length of plain part
top 6' 2" crown 2 3/32" Description of longitudinal joint d. butt straps. No. of strengthening rings —
bottom 6-6" thickness of plates bottom 1/32"

Working pressure of furnace by the rules 162 lbs Combustion chamber plates: Material S. Thickness: Sides 5/8" Back 1/6" Top 5/8" Bottom 5/8" + 27 lbs.

Pitch of stays to ditto: Sides 9" x 9" Back 10" x 10" Top 8 1/2" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 163 lbs

Material of stays S. Diameter at smallest part 1 1/16" Area supported by each stay 100 sq Working pressure by rules 171 lbs End plates in steam space:
Material S. Thickness 15/16" Pitch of stays 15 1/2" x 15 1/2" How are stays secured d. nuts Working pressure by rules 164 lbs Material of stays S

Diameter at smallest part 2 3/8" Area supported by each stay 240 sq Working pressure by rules 166 lbs Material of Front plates at bottom S

Thickness 3/4" Material of Lower back plate S. Thickness 1/8 1/32" Greatest pitch of stays 13" Working pressure of plate by rules 168 lbs

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates S. Thickness: Front 1/6" Back 3/4" Mean pitch of stays 9 1/4"

Pitch across wide water spaces 14" Working pressures by rules 231 lbs. Girders to Chamber tops: Material S. Depth and
thickness of girder at centre 6" x 2" Length as per rule 28" Distance apart 8" Number and pitch of Stays in each 2" of 8 1/2"

Working pressure by rules 164 lbs Superheater or Steam chest; how connected to boiler none. Can the superheater be shut off and the boiler worked
separately — Diameter — Length — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet
holes — Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness —

If stiffened with rings — Distance between rings — Working pressure by rules — End plates: Thickness — How stayed —

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

If not, state whether, and when, one will be sent

Is a Report also sent on the Hull of the Ship?

L.R.P.H. Form No. 8-4 (2/92) - Copyrighted Ink



Lloyd's Register Foundation

5LD989-0002

DONKEY BOILER— Description *Meredith Patent*
 Made at *Stockton* By whom made *Relay Bros.* When made *9/93* Where fixed *Stokehole*
 Working pressure *80 lbs* Tested by hydraulic pressure to *160 lbs* No. of Certificate *716* Fire grate area *20 sq ft* Description of safety valves *Spring*
 No. of safety valves *2* Area of each *3.96* Pressure to which they are adjusted *83 lbs* If fitted with easing gear *yes*. If steam from main boilers can enter the donkey boiler *no*. Diameter of donkey boiler *6'-0"* Length *13'-6"* Material of shell plates *Steel* Thickness *1/2"*
 Description of riveting long. seams *lap double* Diameter of rivet holes *1 1/16"* Whether punched or drilled *punched* Pitch of rivets *2 1/8"*
 Lap of plating *4 1/4"* Per centage of strength of joint Rivets *41.1* Plates *44* Thickness of shell crown plates *1 1/2"* Radius of do. *3 feet* No. of Stays to do. *none*
 Dia. of stays. — Diameter of furnace Top *4'-1"* Bottom *5'-3"* Length of furnace *2'-3"* Thickness of furnace plates *9/16"* Description of joint *lap single* Thickness of furnace crown plates *2"* Stayed by *bladed 103 feet radius* Working pressure of shell by rules *82 lbs*
 Working pressure of furnace by rules *80 lbs* Diameter of ^{take} uptake *2 3/4"* Thickness of ^{take} uptake plates *9/16"* Thickness of ^{C. plates} water tubes *1/2"*
 Stays *18" and 8 1/4 x 8 1/2 plates*

SPARE GEAR. State the articles supplied:— *1 set of connecting rod top and bottom end bolts & nuts, 3 main bearing bolts and nuts, 1 set of coupling bolts, 1 set of feet and bilge pump valves, nuts bolts and assorted iron*
spare propeller.

The foregoing is a correct description,
Wm. Smith & Co. Marine Engineers & Shipbuilders
Millers & Scattergood Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *Machinery and boiler*)
constructed under special survey. materials and workmanship good and efficient, main steam pipe subjected to a hydraulic test of 320 lbs found sound, sluice valves & water tight doors in good working order. In my opinion this vessel is eligible for the record of L.M.C 11/93 in the Register.

It is submitted that
 this vessel is eligible for
 THE RECORD + L.M.C. 11.93 -

Ind
5/12/93.

Certificate (if required) to be sent to **MACHINERY CERTIFICATE**
 WRITTEN.
 The amount of Entry Fee.. £ *2* : : When applied for,
 Special £ *18* : : *29.11.93*
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : : *8.12.93*

J. V. Hindley
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 5 DEC 1893

TUES. 23 JAN 1894

Assigned

+ L.M.C. 11.93



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