

REPORT ON MACHINERY.

Port of Sunderland

WED. 15 MAR 1893

No. in Survey held at Sunderland
Reg. Book. SS "Sibun"
on the SS "Sibun"

Date, first Survey 21st Jan'y Last Survey 9th March 1893
(Number of Visits 29)

Received at London Office

Master W Norris Built at Sunderland By whom built J Blunner & Coy

Tons { Gross 1495
Net 1137
When built 1893

Engines made at Sunderland By whom made George Clark (Ld)

when made 1893

Boilers made at Sunderland By whom made George Clark (Ld)

when made 1893

Registered Horse Power 200 Owners The Sibun SS. Co

Port belonging to London

Nom. Horse Power as per Section 28 220

ENGINES, &c. — Description of Engines Triple compound No. of Cylinders 3

Diameter of Cylinders 22", 36" & 59" Length of Stroke 39" Revolutions per minute 40 Diameter of Screw shaft as per rule 10 5/16
 Diameter of Tunnel shaft as per rule 9 9/16 Diameter of Crank shaft journals 11 1/8" Diameter of Crank pin 11 1/8" Size of Crank webs 22" x 4 1/8"
 Diameter of screw 15-0 Pitch of screw 15-1" No. of blades 4 State whether moveable not Total surface 75 sq ft

No. of Feed pumps 2 Diameter of ditto 3" Stroke 23" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/4" Stroke 23" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 8" x 10" & 3 1/2" x 5 1/2" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room three 2 1/2" diamrs after tunnel well 2 1/2" Holds, &c. Fore hold two 2 1/4" after hold two 2 1/4"
Fore tank centre 2 1/2" wings 2" Engine room tank two 2 1/2" after tank 2 1/2" wings 2" A.W. 2"

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 9th March Is the screw shaft tunnel watertight yes
 Is it fitted with a watertight door yes worked from top platform

BOILERS, &c. — (Letter for record R) Total Heating Surface of Boilers 3346 sq ft

No. and Description of Boilers two ordinary marine type Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs

Date of test 13-1-93 Can each boiler be worked separately yes Area of fire grate in each boiler 48 sq ft No. and Description of safety valves to each boiler two direct spring Area of each valve 4 sq ft Pressure to which they are adjusted 160 lbs Are they fitted with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 20" Mean diameter of boilers 14-0

Length 10-0" Material of shell plates Steel Thickness 1 1/4" Description of riveting: circum. seams double riv'd lap Long. seams triple r. d. b. s.
 Diameter of rivet holes in long. seams 1/4" Pitch of rivets 8 5/16" Top of plates or width of butt straps 19 straps

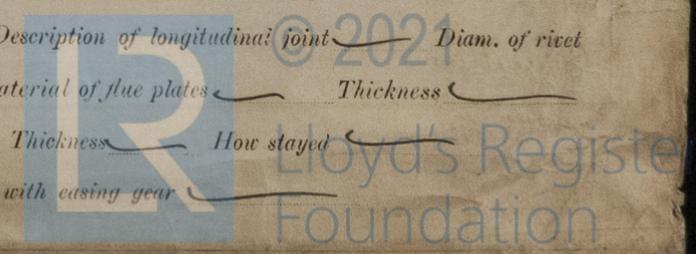
Per centages of strength of longitudinal joint rivets 86% Working pressure of shell by rules 164 lbs Size of manhole in shell 16" x 13"
 Size of compensating ring 8 3/4" x 15 1/16" No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 3'-3"
 Length of plain part top 6 1/4" bottom 6 1/4" Thickness of plates crown 3 3/16" bottom 3 3/16" Description of longitudinal joint welded No. of strengthening rings none

Working pressure of furnace by the rules 162 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 19/32" & 9/16" Top 5/8" Bottom 5/8"
 Pitch of stays to ditto: Sides 9" x 8 1/2" Back 8 1/2" x 8" Top 9 1/2" x 9 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 162 lbs

Material of stays Iron Diameter at smallest part 1 1/2" Area supported by each stay 820 sq in Working pressure by rules 203 End plates in steam space: Material Steel Thickness 13/16" Pitch of stays 20 3/8" x 15 1/8" or are stays secured nuts Working pressure by rules 160 lbs Material of stays Steel
 Diameter at smallest part 2 3/4" Area supported by each stay 3200 sq in Working pressure by rules 140 lbs Material of Front plates at bottom Steel
 Thickness 1 1/16" Material of Lower back plate Steel Thickness 5/8" Greatest pitch of stays 14" Working pressure of plate by rules 173

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 3/4" Back 13/16" Mean pitch of stays 9 1/2"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 160 lbs with abling plate Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 1/2" x 3" x 2 Length as per rule 32" Distance apart 9 1/8" Number and pitch of Stays in each two stays 9 1/2" x 9"

Working pressure by rules 160 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 —
 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 —



SLD986-0025

DONKEY BOILER— Description *Meredith's patent*
 Made at *Stockton* By whom made *Riley Bros* When made *17-3-93* Here fixed *Stokehold*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *606* Fire grate area *28 sq* Description of safety valves *direct spring*
 No. of safety valves *2* Area of each *4.07* Pressure to which they are adjusted *80 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Diameter of donkey boiler *6-9"* Length *14-6"* Material of shell plates *Steel* Thickness *1/2"*
 Description of riveting long. seams *lap double rivet* Diameter of rivet holes *13/16"* Whether punched or drilled *punched* Pitch of rivets *2 13/16"*
 Lap of plating *4 1/4"* Per centage of strength of joint *61.7* Rivets *71.7* Plates *71.7* Thickness of shell crown plates *1/2"* Radius of do. *hemispherical* to do. *do.*
 Dia. of stays. *do.* Diameter of furnace Top *4-6"* Bottom *4-10"* Length of furnace *2-7 1/2"* Thickness of furnace plates *5/8"* Description of joint *lapsingle* Thickness of furnace crown plates *9/16"* Stayed by *hemispherical* Working pressure of shell by rules *84 lbs*
 Working pressure of furnace by rules *84 lbs* Diameter of tubes *3"* Thickness of tube plates *9/16"* Thickness of water plates *9/16"* *cc plates 9/16 top 1/2"*

SPARE GEAR. State the articles supplied:— *Top & bottom end connecting rod bolts & nuts two main bearing bolts & nuts, one set of coupling bolts, feed & bilge pump valves, bolts, nuts & iron, propeller.*

The foregoing is a correct description,
FOR GEORGE CLARK LIMITED.
George Clark Manufacturer of main engines & boilers.

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this Vessel has been constructed under spec survey. the material & workmanship are good & effecient and the engines when tried under steam, worked satisfactorily. In my opinion the machinery of this Vessel is in good order & safe working condition and eligible for the notification in the Register Book of L.M.C. 3-93.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 3 93
20/3-3-93

Certificate (if required) to be sent to
 The amount of Entry Fee. . . £ *2* : : When applied for,
 Special £ *31* : : *10 March 93* *STW*
 Donkey Boiler Fee £ : : When received,
 Travelling Expenses (if any) £ : : *14 March 93*

Pat Salmon
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **FRI 17 MAR 1893**
 Assigned *WRITTEN* *+ L.M.C. 3, 93*

