

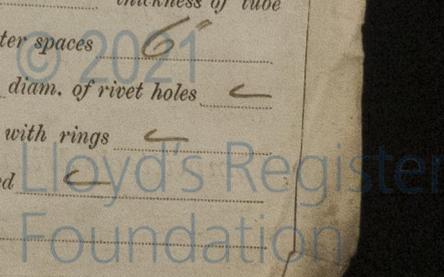
REPORT ON MACHINERY

13293
THURSDAY 6 DEC 1883
1579.75
1018.82
Report recd 30/12/83 sent to C.M.

No. 14210 (New)
No. in Survey held at Burcastle
Reg. Book. Burcastle
Date, first Survey 22nd June Last Survey 30th Nov 1883
on the Screw Steamer "Western Star"
Master A. Penell Built at Lundeland By whom built Wm Austin & Sons
Engines made at Burcastle By whom made North Eastern Marine Eng. Co. Ld. When built 1883
Boilers made at do By whom made do when made 1883
Registered Horse Power 140 Owners Johnson Bros when made 1883
Port belonging to West. India

ENGINES, &c.—
Description of Engines Direct acting compound surface condensing
Diameter of Cylinders 31" x 58" Length of Stroke 3.0" No. of Rev. per minute 65 Point of Cut off, High Pressure .5 Low Pressure .5
Diameter of Screw shaft 10 1/4" Diam. of Tunnel shaft 10" Diam. of Crank shaft journals 10 1/2" Diam. of Crank pin 10 1/4" size of Crank webs 15" x 7 1/2"
Diameter of screw 13-3" Pitch of screw 16-3" mean No. of blades 4 state whether moveable no total surface 45 1/2 sq ft
No. of Feed pumps 2 diameter of ditto 3 1/2" Stroke 3.0" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 diameter of ditto 3 1/2" Stroke 3.0" Can one be overhauled while the other is at work yes
Where do they pump from Tanks, holds, bilges & hot well
No. of Donkey Engines 2 Size of Pumps 6" x 9" & 4" x 6" Where do they pump from Tanks, holds, & bilges & sea
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 4" Are they connected to condenser, or to circulating pump Circulating pump
How are the pumps worked Direct from engine crankhead
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 all 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 never
Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Upper platform

OILERS, &c.—
Number of Boilers One Description Cylindrical Single End Whether Steel or Iron Iron
Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test 23.10.83. Ho & Co. -1466
Description of superheating apparatus or steam chest no dome
Can each boiler be worked separately — Can the superheater be shut off and the boiler worked separately —
No. of square feet of fire grate surface in each boiler 42 1/2 Description of safety valves Spring No. to each boiler 2
Area of each valve 17.72 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 2.0" Diameter of boilers 16.0"
Length of boilers 11.14 description of riveting of shell long. seams lap treble circum. seams lap double Thickness of shell plates 1 3/8"
Diameter of rivet holes 1 3/8" whether punched or drilled drilled pitch of rivets 4 1/2" Lap of plating 8 1/2" & 6 1/2"
Percentage of strength of longitudinal joint 90 7/10 working pressure of shell by rules 82.2 lbs size of manholes in shell 16" x 12"
No. of compensating rings 4 x 1 1/8" No. of Furnaces in each boiler 3
Inside diameter 3.9" length, top 6.9" bottom 9.6" thickness of plates 5/8" description of joint A. built If rings are fitted —
Greatest length between rings 5.2" working pressure of furnace by the rules 87 lbs combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"
Pitch of stays to ditto, sides 9 1/2" x 9" back 9 1/2" x 9" top Curved If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 80 lbs
Diameter of stays at smallest part 1 1/8" working pressure of ditto by rules 101 lbs end plates in steam space, thickness 3/8"
Pitch of stays to ditto 18 1/2" x 16" how stays are secured A. nuts & washers working pressure by rules 80.2 lbs diameter of stays at smallest part 2 1/4"
working pressure by rules 80.6 lbs Front plates at bottom, thickness 5/8" Back plates, thickness 5/8"
Greatest pitch of stays 11 1/2" working pressure by rules — Diameter of tubes 3 1/2" pitch of tubes 5" thickness of tube plates, front 3/4" back 3/4" how stayed tubes
Diameter of Superheater or Steam chest — length — thickness of plates — description of longitudinal joint — diam. of rivet holes —
Pitch 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 —



DONKEY BOILER— Description *Vertical three crop tubes*
 Made at *Gateshead* by whom made *Blake Chapman & Co* when made *17.8.83* where fixed *Stokehold*
 Working pressure *70 lb* tested by hydraulic pressure to *140 lb* No. of Certificate *1382* fire grate area *26 sq* description of safety
 valves *Spring* No. of safety valves *2* area of each *9.62* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *6.9"* length *13.0"* description of riveting *lap double*
 Thickness of shell plates *9/16"* diameter of rivet holes *15/16"* whether punched or drilled *punched* pitch of rivets *3 3/8"* lap of plating *4.8"*
 per centage of strength of joint *72.2%* thickness of crown plates *9/16"* stayed by *6 Stay 1 3/4" diam*
 Diameter of furnace, top *5.5"* bottom *5.9 3/4"* length of furnace *5.4"* thickness of plates *9/16"* description of joint *lap single riveted*
 Thickness of furnace crown plates *9/16"* stayed by *as above* working pressure of shell by rules *82 lb*
 Working pressure of furnace by rules *80 lb* diameter of uptake *15"* thickness of plates *7/16"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *2 Main bearing bolts & nuts 2 top end & 2*
bottom end bolts & nuts 1 Set of Coupling bolts & nuts 1 Set of
feed & big valves, Set of piston Spring for each piston and
a quantity of assorted iron & bolts & nuts

The foregoing is a correct description,
S. N. M. King

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel*)
has been specially surveyed during construction the material
and workmanship good and under the vessel eligible in
*my opinion to have the notification **L. M. C. 11. P. 3***
in the Register Book of the Society

It is submitted that the
vessel is eligible to have the
notification & shall receive
M. J. 1/10

The amount of Entry Fee .. £ *2* : — :— received by me,
 Special £ *21* : — :—
 Donkey Boiler Fee £ — : — :—
 Certificate (if required) *fr. chs* — : — :— *3rd Decr. 1883.*
 To be sent as per margin.

(Travelling Expenses, if any, £ *1.14.6*)
 Committee's Minute *FRIDAY 7 DEC 1883*

Richard Haist
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

