

REPORT ON MACHINERY.

17294

No. 17294

No. in Survey held at Newcastle

Date, first Survey 25th October Last Survey 19th Decr 1883

Received at London Office TUESDAY 15 JAN 1884

Reg. Book.

on the S.S. "John Grafton"

(Number of Visits 10)

Tons 586

Master Hesley

Built at Newcastle

By whom built Palmer & Co Ltd

When built 1883

Engines made at Newcastle

By whom made Palmer & Co Ltd

when made 1883

Boilers made at Do

By whom made Do

when made 1883

Registered Horse Power 80

Owners Stephenson Clarke & Co

Port belonging to London

ENGINES, &c.—

Description of Engines Inverted Compound Surface Condensing

Diameter of Cylinders 23 & 45 Length of Stroke 30 No. of Rev. per minute 80 Point of Cut off, High Pressure .5 Low Pressure .5

Diameter of Screw shaft 8 1/4 Diam. of Tunnel shaft 7 1/2 Diam. of Crank shaft journals 8 1/4 Diam. of Crank pin 8 1/2 size of Crank webs 10 1/2 x 5 1/2

Diameter of screw 11 Pitch of screw 12 No. of blades 4 state whether moveable no total surface 36 ft

No. of Feed pumps 2 diameter of ditto 3 Stroke 14 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 diameter of ditto 3 Stroke 14 Can one be overhauled while the other is at work yes

Where do they pump from Engine space & 4 sections from arrangement of 4 Hold 1. Secd. South

No. of Donkey Engines 2 Size of Pumps 11 x 12 & 4 x 8 Where do they pump from All bilges as above

Main hold tanks 1.

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 4" Are they connected to condenser, or to circulating pump no

How are the pumps worked Lower over Condenser

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 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 — 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 new

Is the screw shaft tunnel (no tunnel. the engines placed over) and fitted with a sluice door worked from —

BOILERS, &c.—

Number of Boilers One Description Cylindrical Whether Steel or Iron Steel

Working Pressure 80 Tested by hydraulic pressure to 160 Date of test 13th November 1883

Description of superheating apparatus or steam chest 1 Cylinder fixed aft with contracted neck

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 45 Description of safety valves Spring No. to each boiler 2

Area of each valve 13 sq ft 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 18 Diameter of boilers 12-9

Length of boilers 10-0 description of riveting of shell long. seams Double Lap circum. seams Double Lap Thickness of shell plates 3/4"

Diameter of rivet holes 1 1/2 whether punched or drilled Drilled pitch of rivets 4 1/4 Lap of plating 8 1/2

Percentage of strength of longitudinal joint 72.5 working pressure of shell by rules 87 lbs size of manholes in shell 16 x 12

Size of compensating rings 5 x 3/8 No. of Furnaces in each boiler 3

Outside diameter 37" length, top 7-0 bottom 9-5 thickness of plates 1/2 & 3/8 description of joint Double Step if rings are fitted half

Greatest length between rings 6-6 working pressure of furnace by the rules 108 combustion chamber plating, thickness, sides 1/2 back 1/2 top 1/2

Pitch of stays to ditto, sides 9 3/4" back 9 3/4" top Cur If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 80

Diameter of stays at smallest part 1 1/4" working pressure of ditto by rules 100 end plates in steam space, thickness 3/8

Pitch of stays to ditto 19 x 19 how stays are secured By nuts working pressure by rules 80 lbs diameter of stays at smallest part 2 1/4"

Greatest pitch of stays 9 3/4" working pressure by rules — Diameter of tubes 3 1/2 pitch of tubes 4 3/4 thickness of tube plates, front 3/4 back 11/16

how stayed Tubes pitch of stays 14 1/2 width of water spaces 6

Diameter of Superheater or Steam chest 3-0 length 5-0 thickness of plates 1/2 description of longitudinal joint A Lap diam. of rivet holes 3/8

Pitch of rivets 2 7/8 working pressure of shell by rules 200 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 11/16 how stayed 4 Stays

1 1/4" off diameter Superheater or steam chest; how connected to boiler Contracted necks

NWC789-0041

Port
Y
(State if Report is also sent on the Hull of the Ship)

Report nos 3112/83 sent to London 14/1/84

Boiler tracing & plans of Steel test sent forward

DONKEY BOILER— Description *Upright*
 Made at *Londonderry* by whom made *Welford Mather* when made *2/10/83* where fixed *Threhold*
 Working pressure *80 lbs* tested by hydraulic pressure to *160* No. of Certificate *699* fire grate area *13* description of safety valves *Spring*
 No. of safety valves *1* area of each *8.5"* if fitted with easing gear *yes* if steam from main boilers can enter the donkey boiler *no*
 diameter of donkey boiler *5-0* length *9-9* description of riveting *Double Lap*
 Thickness of shell plates *7/16* diameter of rivet holes *5/8* whether punched or drilled *punched* pitch of rivets *2 3/4* lap of plating *2 3/4*
 per centage of strength of joint *72.7* thickness of crown plates *7/16* stayed by *Divided & 2 Stays*
 Diameter of furnace, top *3-6* bottom *4-7* length of furnace *4-5* thickness of plates *1/2* description of joint *Single Lap*
 Thickness of furnace crown plates *7/16* stayed by *as above* working pressure of shell by rules *82 lb*
 Working pressure of furnace by rules *84 lbs* diameter of uptake *13* thickness of plates *5/8* thickness of water tubes *5/8*

SPARE GEAR. State the articles supplied:— *2 Tops & 2 bottom and connecting rods bolts & nuts*
2 main bearing bolts, 1 set of coupling bolts,
1 set of feed & 1 set of bilge pump valves, 1 set of piston spring
a quantity of assorted bolts & nuts, 6 bars iron of various sizes
 The foregoing is a correct description.

W. Hall Manufacturer.

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 sound and satisfactory and eligible in my opinion to have the notation of Lloyd's M & 12-83 in the Society's Register Book.

No submitted that this vessel is eligible to have the notation of LMC recorded 15/1/84

The amount of Entry Fee *£ 1* : - : - received by me,
 Special .. *£ 12* : - : -
 Donkey Boiler Fee .. *£ -* : - : -
 Certificate (if required) *£ -* : - : - *15th Jan 1884*
 To be sent as per margin.

John Prockat
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRIDAY 13 JAN 1884* 18

