

REPORT ON MACHINERY.

No. 18225

Received at London Office MONDAY 2 MARCH 1885

No. in Survey held at Newcastle Date, first Survey 10th Octr 1884 Last Survey 26th Feby 1885

Reg. Book. on the S.S. Donbighshire (Number of Visits 20) Tons 2538
1663

Master J. Hurrocks Built at Newcastle By whom built Swan & Hunters When built 1885

Engines made at Newcastle By whom made R & W Hawthorn when made 1885

Boilers made at Do By whom made Do when made 1885

Registered Horse Power 300 Owners D. J. Jenkins & Co. Port belonging to London

ENGINES, &c.—

Description of Engines Inverted compound surface condensing
Diameter of Cylinders 38 & 72 Length of Stroke 48 No. of Rev. per minute 64 Point of Cut off, High Pressure .6 Low Pressure .5

Diameter of Screw shaft 13" Diam. of Tunnel shaft 12 3/4 Diam. of Crank shaft journals 13 Diam. of Crank pin 13 size of Crank webs 15 x 8

Diameter of screw 16-0 Pitch of screw 19-0 No. of blades 4 state whether moveable yes total surface 72 ft

No. of Feed pumps 2 diameter of ditto 3 3/4 Stroke 24 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 diameter of ditto 3 3/4 Stroke 24 Can one be overhauled while the other is at work yes

Where do they pump from Engine space 3, M. hold 3, F. hold 3, A. hold 1, Tank 1, & all Tanks

No. of Donkey Engines Two Size of Pumps 3 1/2 x 7 & 8 x 14 Where do they pump from All bilges as above

Engine room tank 3, M. hold tank 3, A. hold tanks 2.

Are all the bilge suction pipes fitted with roses yes Are the roses always accessible no Are the sluices on Engine room bulkheads always accessible yes

No. of bilge injections 1 and sizes 14 Are they connected to condenser, or to circulating pump no

How are the pumps worked Down via 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 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 no

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 now

Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Top platform of engine space

BOILERS, &c.—

Number of Boilers Two Description Cylindrical Whether Steel or Iron Steel

Working Pressure 100 lbs Tested by hydraulic pressure to 200 lbs Date of test 14th Jan'y 1885

Description of superheating apparatus or steam chest none

Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately no

No. of square feet of fire grate surface in each boiler 67.5 Description of safety valves Spring No. to each boiler 2

Area of each valve 12.5 sq" Are they fitted with easing gear yes No. of safety valves to superheater no area of each valve no

Are they fitted with easing gear no Smallest distance between boilers and bunkers no woodwork 21" Diameter of boilers 15-9

Length of boilers 10-6 description of riveting of shell long. seams Shell Laps circum. seams Double Laps Thickness of shell plates 85/64

Diameter of rivet holes 1 1/2" whether punched or drilled Drilled pitch of rivets 7 1/2 & 3 3/4" Lap of plating 11 5/8"

Per centage of strength of longitudinal joint 80% working pressure of shell by rules 100 lbs size of manholes in shell 16 x 12

Size of compensating rings 6" x 1 1/8" No. of Furnaces in each boiler 3

Outside diameter 46 length, top 3-3 bottom 3-9 thickness of plates 9/16 description of joint Welded if rings are fitted no

Greatest length between rings 3-9 working pressure of furnace by the rules 100 combustion chamber plating, thickness, sides 17/32 back 17/32 top 17/32

Pitch of stays to ditto, sides 9 back 9 5/16 top 23 If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 100 Diameter of stays at smallest part 1 1/4 working pressure of ditto by rules 115 end plates in steam space, thickness 5/16

Pitch of stays to ditto 17 1/2 how stays are secured 9 nuts working pressure by rules 110 lbs diameter of stays at smallest part 2 1/4 working pressure by rules 111 lbs Front plates at bottom, thickness 9/8 Back plates, thickness 3/32

Greatest pitch of stays 12 working pressure by rules 100 Diameter of tubes 3 1/2 pitch of tubes 4 3/4 thickness of tube plates, front 27/32 back 27/32 how stayed Tubes pitch of stays 14 1/4 width of water spaces 8"

Diameter of Superheater or Steam chest no length no thickness of plates no description of longitudinal joint no diam. of rivet holes no

Pitch of rivets no working pressure of shell by rules no diameter of flue no thickness of plates no If stiffened with rings no

Distance between rings no working pressure by rules no end plates of superheater, or steam chest; thickness no how stayed no

Superheater or steam chest; how connected to boiler no



NWC 793-0016

18225
Report recd 26/2/85 sent to Lon 29/2/85

DONKEY BOILER— Description *Horizontal, Flat sided, Multitubular*
 Made at *Shekton* by whom made *Wiley Bros* when made *23.12.84* here fixed *on deck*
 Working pressure *100 lbs* tested by hydraulic pressure to *200 lbs* No. of Certificate *1199* fire grate area *15-4* description of safety
 valves *Spring* No. of safety valves *two* area of each *70"* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *6-0"* length *8-6* description of riveting *single lap double*
 Thickness of shell plates *1/2* diameter of rivet holes *7/8* whether punched or drilled *Punched* pitch of rivets *2 1/8* lap of plating *0*
 per centage of strength of joint *62-6* thickness of crown plates *5/8* stayed by *1 3/8" Stays 12 3/4 pitch*
 Diameter of furnace, top *3-6* bottom *parallel* length of furnace *5-8* thickness of plates *1/32* description of joint *Double Butt joint*
 Thickness of furnace crown plates *1/2* stayed by *several stays 1 1/2" dia 4 3/8" pitch* working pressure of shell by rules *100 lbs*
 Working pressure of furnace by rules *100 lbs* diameter of uptake *2-3* thickness of plates *1/16* thickness of water tubes *plates 1/8-1/16*

All stub plates except dome.
SPARE GEAR. State the articles supplied:— *2 Connecting rods top & 2 bottom bolts,*
2 M bearing bolts, 1 set coupling bolts, 1 set feed & 1 set bilge
pump valves, 1 propeller boss & 4 blades, 1 propeller shaft,
1 half crank shaft, 2 Safety valve springs, 2 top & 2
bottom C rod bushes
The foregoing is a correct description, as signed
Wiley Brothers 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 + Lloyd's M.C. 2-85 in the Society's
register

It is submitted that this vessel
is eligible to have the notation
+ M.C. 2-85 recorded
W.F.S.
2/3/85

The amount of Entry Fee .. £ 3 : - : - received by me,
 Special £ 35 : - : -
 Donkey Boiler Fee £ - : - : -
 Certificate (if required) gratis : - : - 28th Feb 1885
 To be sent as per margin.
 (Travelling Expenses, if any, £)

W.F.S.
John Buckhol
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUESDAY 3 MARCH 1885

