

REPORT ON MACHINERY.

No. 5276.

Received at London Office SEP 21 1883

No. in Survey held at Whitby & Stockton Date, first Survey 25th April Last Survey 24th Aug 1883
Reg. Book.

on the S. S. Hephysus (Number of Visits 12) Tons 2042
1351

Master Jenkin Built at Whitby By whom built J. Turnbull & Sons When built 1883

Engines made at Stockton By whom made Blair & Co. Ltd when made Do

Boilers made at Do By whom made Do when made 18

Registered Horse Power 160 Owners James Brightman & Co Port belonging to London

Engines, &c.—

Description of Engines Compound Direct Surface Condensing

Number of Cylinders 3 1/2 Length of Stroke 42 No. of Rev. per min 65 Point of Cut off, High Pressure 2 1/2 Low Pressure 2 1/2

Diameter of Screw shaft 12 1/4 Diam. of Tunnel shaft 11 3/8 Diam. of Crank shaft journals 12 Diam. of Crank pin 12 1/2 size of Crank webs 6 3/4 x 8 1/2

Diameter of screw 15 Pitch of screw 1 1/2 No. of blades 10 state whether moveable No total surface not ascertainment

No. of Feed pumps Two diameter of ditto 4 Stroke 30 Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two diameter of ditto 4 Stroke 30 Can one be overhauled while the other is at work Yes

Where do they pump from From pump drawn from fore hold, engine room, after all ballast tanks, after pump from engine room

No. of Donkey Engines Two Size of Pumps 1/2 dia x 9 stroke Where do they pump from Large donkey from fore hold, engine room after all ballast tanks, small donkey from sea, fore hold & ballast tanks

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 6 Are they connected to condenser, or to circulating pump Circulating pump

How are the pumps worked By hand worked from cross head in low pressure piston rod

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Stop valves & cocks

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 Yes

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 Said to be and fitted with a sluice door Yes worked from Top platform in engine room

BOILERS, &c.—

Number of Boilers Two Description Cylindrical Multitubular Whether Steel or Iron Internal plates of steel

Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test 3. 8. 83 Certificate 8989

Description of superheating apparatus or steam chest Vertical attached at neck

Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately No Superheating

No. of square feet of fire grate surface in each boiler 45 Description of safety valves Sprung No. to each boiler Two

Area of each valve 14.18 Are they fitted with easing gear Yes No. of safety valves to superheater 1 area of each valve 1

Are they fitted with easing gear Yes Smallest distance between boilers and bunkers or woodwork 4 1/2 Diameter of boilers 13.6 1/8

Length of boilers 10.2 description of riveting of shell long. seams Double Thickness of shell plates 1 1/16

Diameter of rivet holes 13/16 whether punched or drilled Drilled pitch of rivets 4 1/2 Lap of plating Stays 11" broad

Per centage of strength of longitudinal joint 72.9 working pressure of shell by rules 93.9 lbs size of manholes in shell 16 x 12

Size of compensating rings Rectangular plate 28" x 24" x 1 1/8 No. of Furnaces in each boiler Three

Outside diameter 3.5 length, top 6.3 bottom 9.0 thickness of plates 9/16 description of joint Stays 1 1/8 if rings are fitted No

Greatest length between rings Yes working pressure of furnace by the rules 94.8 lbs combustion chamber plating, thickness, sides 1/2 back 1/2 top 1/2

Pitch of stays to ditto, sides 8 x 8 back 8 1/2 x 8 1/2 top Round If stays are fitted with nuts or riveted heads Round working pressure of plating by rules 88.5

Diameter of stays at smallest part 15/16 working pressure of ditto by rules 112 lbs end plates in steam space, thickness 1/8

Pitch of stays to ditto 16 1/2 x 16 1/2 how stays are secured Washed working pressure by rules 100.4 lbs diameter of stays at smallest part 2 1/2

Greatest pitch of stays 17 1/4 x 8 1/2 working pressure by rules 81.2 lbs Diameter of tubes 3 1/4 pitch of tubes 11 1/2 x 11 1/2 thickness of tube 1 1/8

back 1 1/8 how stayed Stay tubes pitch of stays 13 1/2 x 9 1/4 width of water spaces 1 1/4 diam. of rivet holes 13/16

Diameter of Superheater or Steam chest 3.4 length 5.0 thickness of plates 1/2 description of longitudinal joint Double If stiffened with rings Yes

Pitch of rivets 3 1/4 working pressure of shell by rules 126 lbs diameter of flue 1 1/2 thickness of plates 1/2 how stayed Stay tubes

Distance between rings Yes working pressure by rules Yes end plates of superheater, or steam chest; thickness 1/8 how stayed Stay tubes

Superheater or steam chest; how connected to boiler Not attached

DONKEY BOILER— Description Vertical, water tubes in furnace
Made at Stockton by whom made Riley Bros when made 4.8.83 where fixed Stockton
Working pressure 40 lbs tested by hydraulic pressure to 100 lbs No. of Certificate 890 fire grate area 23.76 sq ft description of safety
valves Spring No. of safety valves Two area of each 7.0 sq ft if fitted with easing gear Yes if steam from main boilers can
enter the donkey boiler No diameter of donkey boiler 6-6 length 13-0 description of riveting Lang's patent, lap, double
Thickens of shell plates 1/32 diameter of rivet holes 3/16 whether punched or drilled punched pitch of rivets 3 3/4 lap of plating 1 1/4
per centage of strength of joint 40.4 thickness of crown plates 1/32 stayed by Six Stays 1 1/2 dia
Diameter of furnace, top 5-4 bottom 5-11 length of furnace 5-2 thickness of plates 7/32 description of joint Lap Single riveted
Thickens of furnace crown plates 1/2 stayed by Six Stays 1 1/2 diameter working pressure of shell by rules 40 lbs
Working pressure of furnace by rules 40.2 lbs diameter of uptake 16 thickness of plates 7/16 thickness of water tubes 3/8

SPARE GEAR. State the articles supplied: Two connecting rod top end bolts & nuts, two cross
rod bottom end bolts & nuts, two main bearing bolts, one set coupling
one set helix. feed pump valves, one set piston springs, assorted bolts
& nuts, iron of various sizes, spare propeller & other spare gear
The foregoing is a correct description,
Robt Blair & Co Manufacturers of Engines. Main Boilers only

General Remarks (State quality of workmanship, opinions as to class, &c.)

Materials & workmanship good
The buck tube plates, combustion chamber plating &
furnace crown plates of main boilers & all rivets in place
are of Steel manufactured by J. & W. Beardmore,
Glasgow.

The Machinery & Boilers have been built under special
Survey & are in good order & safe working condition & in my
opinion require for the Certificate 75. 1. 11. 83 in the
Register Book.

*It is submitted that this vessel
is not a steam vessel
& does not require
a certificate
3/9/83*

The amount of Entry Fee £ 2 : : : received by me,
Special .. £ 14 : : :
Donkey Boiler Fee .. £ : : :
Certificate (if required) .. £ : : : 30.8.1883
To be sent as per margin.

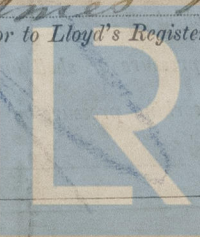
(Travelling Expenses, if any, £ : : :)

Committee's Minute

4 SEPTEMBER 1883

[Signature]

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



Lloyd's Register
Foundation