

REPORT ON MACHINERY.

No. 5675.

No. in Survey held at *Goole*
Reg. Book.

Date, first Survey *9th April 83* Last Survey *27 Jan 1885*
(Number of Visits *21*)

on the *iron steam ship "Paradox"* Tons *630.64*
Master *John Cook* Built at *Blackwater* By whom built *Pascoe & Wright* When built *1883*
Engines made at *Sunderland* By whom made *North Eastern Engineering Co.* when made *1877*
Boilers made at *Goole* By whom made *Thomas Scott* when made *1884*
Registered Horse Power *98* Owners *Executive of Mill France* Port belonging to *London*

ENGINES, &c.—

Description of Engines *Vertical, Compound inverted cylindrical Surface condensing*
Diameter of Cylinder *21 27 4 47* Length of Stroke *30* No. of Rev. per minute *2 1/3* Point of Cut off, High Pressure *2/3* Low Pressure *3/4*
Diameter of Screw shaft *8 1/4* Diam. of Tunnel shaft *7 1/8* Diam. of Crank shaft journals *8 1/8* Diam. of Crank pin *8 1/4* size of Crank webs *9 1/2 x 6*
Diameter of screw *11 1/8* Pitch of screw *17 1/2* No. of blades *4* state whether moveable *no* total surface *38 sq. ft.*
No. of Feed pumps *2* diameter of ditto *3* Stroke *30* Can one be overhauled while the other is at work *yes*
No. of Bilge pumps *2* diameter of ditto *3* Stroke *30* Can one be overhauled while the other is at work *yes*
Where do they pump from *Main compartments (engine room & hold) & tanks*
No. of Donkey Engines *2* Size of Pumps *3 1/2 ton & 5 1/2 ton* Where do they pump from *The ballast engine from hold and tanks & donkey boiler only. The donkey engine from bilge & tanks. Sea, that will with deliveries to deck, main & donkey boiler*
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 *2* and sizes *2 1/4* Are they connected to condenser, or to circulating pump *to circulating pump*
How are the pumps worked *from piston rod crossheads*
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 *deck delivery of donkey engine* How are they protected *this is an iron pipe protected by a beam*
Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times *yes in the engine room*
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 *Not now*
Is the screw shaft tunnel watertight *Reported* and fitted with a sluice door *yes* worked from *upper deck*

BOILERS, &c.—

Number of Boilers *one* Description *circular, multitubular* Whether Steel or Iron *Iron*
Working Pressure *7 1/2 lb* Tested by hydraulic pressure to *160 lb* Date of test *17 November 84*
Description of ~~superheating apparatus~~ or steam chest *horizontal cylindrical with dished ends*
Can each boiler be worked separately *x* Can the superheater be shut off and the boiler worked separately *to Superheater*
No. of square feet of fire grate surface in each boiler *63* Description of safety valves *Spring loaded* No. to each boiler *2*
Area of each valve *15.9 sq. in* Are they fitted with easing gear *yes* No. of safety valves to superheater *—* area of each valve *—*
Are they fitted with easing gear *yes* Smallest distance between boilers and bunkers *on woodwork main boiler 4" donkey boiler close* Diameter of boilers *13' 6"*
Length of boilers *10' 11"* description of riveting of shell long. seams *double riveted butt with double straps* circum. seams *double riveted lap* Thickness of shell plates *7/8"*
Diameter of rivet holes *1/8"* whether punched or drilled *drilled* pitch of rivets *Long 1 1/2 in 4" Lap of plating 11 1/4" Straps*
Per centage of strength of longitudinal joint *75* working pressure of shell by rules *80 lb* size of manholes in shell *16" x 13"*
Size of compensating rings *6 1/2" x 11 1/8"* No. of Furnaces in each boiler *3*
Outside diameter *34"* length, top *7' 6"* bottom *10' 3"* thickness of plates *1/2"* description of joint *butt with double straps* if rings are fitted *Ornamental*
Greatest length between rings *7' 5"* working pressure of furnace by the rules *75 lb* combustion chamber plating, thickness, sides *1/2"* back *1/2"* top *1/2"*
Pitch of stays to ditto, sides *4' x 8' 9"* back *9' x 9"* top *10' x 10"* If stays are fitted with nuts or riveted heads *nutted* working pressure of plating by rules *80 lb* Diameter of stays at smallest part *1 1/4"* working pressure of ditto by rules *100 lb* end plates in steam space, thickness *7/8" with 1/2" drilling plates*
Pitch of stays to ditto *16 1/2" x 17" x 16"* how stays are secured *double nut & washers* working pressure by rules *80 lb* diameter of stays at smallest part *2 1/4"* working pressure by rules *82 lb* Front plates at bottom, thickness *1/2"* Back plates, thickness *5/8"*
Greatest pitch of stays *12"* working pressure by rules *83 lb* Diameter of tubes *3 1/2"* pitch of tubes *4 1/4"* thickness of tube plates, front *1/2"* back *5/8"* how stayed *4 stay tube pitch of stays 15 1/2" x 9 1/2"* width of water spaces *1 1/2"*
Diameter of Superheater or Steam chest *42"* length *6' 6"* thickness of plates *3/8"* description of longitudinal joint *double lap* diam. of rivet holes *13/16"*
Pitch of rivets *2 1/2"* working pressure of shell by rules *91 lb* 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 *7/8"* how stayed *dished & 3 2/8" stays*
Superheater or Steam chest; how connected to boiler *by each piece riveted on*

DONKEY BOILER— Description *Vertical Cylinder with internal furnace & flue*
Made at *Gorkh* by whom made *Thos Scott* when made *1884* where fixed *in Strickland*
Working pressure *75 lb* tested by hydraulic pressure to *150 lb*. No. of Certificate *1449* fire grate area *14 sq. ft.* description of saf
valves *spring loaded* No. of safety valves *one* area of each *7 sq. in.* if fitted with easing gear *yes* if steam from main boilers can
enter the donkey boiler *yes* diameter of donkey boiler *5' 0"* length *9' 2"* description of riveting *Long 4 double riv 2 lap*
Thickness of shell plates *7/16* diameter of rivet holes *13/16* whether punched or drilled *punched* pitch of rivets *2 1/2* lap of plating *4*
per centage of strength of joint *67* thickness of crown plates *9/16* stayed by *6 1/2 vertical stays*
Diameter of furnace, top *3' 10"* bottom *4' 5"* length of furnace *4' 6"* thickness of plates *7/16* description of joint *Long 4 riv 2 lap*
Thickness of furnace crown plates *7/16* stayed by *6 1/2 vertical stays* working pressure of shell by rules
Working pressure of furnace *approved by rules* *75 lb* diameter of uptake *3/8* thickness of plates *3/8* thickness of water tubes *7/16*

SPARE GEAR. State the articles supplied:—*2 connecting rod top end bolt, nuts. 2 bottom end do.*
4 main bearing bolts. 1 set coupling bolts. 1 set blue type pump valves
50 Bolt nuts assorted. 4 feet assortment.

The foregoing is a correct description,
Thos Scott Manufacturer.

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

*The Donkey machinery of this vessel are now in my opinion in safe working condition
and the case is respectfully submitted as eligible for the notification L.M.C. 1.85
and N.B. 84 in the Register Book.*

The Surveyors, O'Fall.

The amount of Entry Fee .. £ 1: " received by me,
Special .. £ 10: "
Donkey Boiler Fee .. £ 2: 2 "
Certificate (if required) .. £ 5: 10: 4
To be sent as per margin.
(Travelling Expenses, if any, £ 5: 10: 4)

TUESDAY 14 APRIL 1885

Committee's Minute

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



© 2020

Lloyd's Register
Foundation