

# REPORT ON MACHINERY.

No. 5342

No. in Survey held at Reg. Book.

Montpelier Amundsen Date, first Survey 23<sup>rd</sup> April

Received at London Office

THURSDAY 23<sup>rd</sup> APRIL 1883

Last Survey 8<sup>th</sup> May 1883

(Number of Visits 28) 1697

Tons 1100

on the

S. S. "Robina"

Master

H. J. Riddell

Built at

Sanduland

By whom built

J. L. Thompson Esq

When built 1883

Engines made at

Montpelier

By whom made

M. Richardson Esq

when made 1883

Boilers made at

ditto

By whom made

ditto

when made 1883

Registered Horse Power

140

Owners

Russell Norlands

Port belonging to

Whitty

## ENGINES, &c.—

Description of Engines Compound Beam Steam - Joint acting - Surface condensing.  
Diameter of Cylinders 32" and 59" Length of Stroke 33" No. of Rev. per minute 65 - Point of Cut off, High Pressure 1/2 stroke Low Pressure 1/2 stroke  
Diameter of Screw shaft 11" Diam. of Tunnel shaft 9 1/4" Diam. of Crank shaft journals 10" Diam. of Crank pin 1 1/2" size of Crank webs 12 1/2" x 5 9/16"  
Diameter of screw 12 1/2" Pitch of screw 15:0" No. of blades 4 state whether moveable No - total surface 65 sq. ft.  
No. of Feed pumps 2 diameter of ditto 3 3/4" Stroke 21" Can one be overhauled while the other is at work Yes  
No. of Bilge pumps 2 diameter of ditto 3 3/4" Stroke 21" Can one be overhauled while the other is at work Yes  
Where do they pump from Fore hold, fore hold, engine bilges and after well.  
No. of Donkey Engines 2 Size of Pumps 7 1/2" dia. 9" stroke 3 1/2" dia. 9" stroke Where do they pump from Small one fore hold, fore hold, after well, engine bilges, sea and hot well. Large one fore hold & engine bilges.  
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 1/2" dia. Are they connected to condenser, or to circulating pump Circulating pump.  
How are the pumps worked By lever attached to crank of after engine.  
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Ditto.  
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  
How are they protected By cover  
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 Nov 1882  
Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from platform in engine room

## BOILERS, &c.—

Number of Boilers 2 Description Compound beam single end Whether Steel or Iron Cast steel.  
Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test 28-9-83 Certificate No. 1022  
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 Yes  
Area of square feet of fire grate surface in each boiler 47. Description of safety valves Spring. No. to each boiler 2  
Area of each valve 15.03 sq ft Are they fitted with easing gear Yes No. of safety valves to superheater 2 area of each valve 15.03  
Are they fitted with easing gear Yes Smallest distance between boilers and bunkers or woodwork 18" to bunkers Diameter of boilers 13' 9"  
Length of boilers 9' 3" description of riveting of shell long. seams 18" dia. circum. seams 18" dia. circum. Thickness of shell plates 13/16"  
Diameter of rivet holes 1 1/2" whether punched or drilled drilled pitch of rivets 5-7/8" Lap of plating 14 1/2" dia. rivets  
Percentage of strength of longitudinal joint 82.4% working pressure of shell by rules 81.1 lbs size of manholes in shell 15" x 11"  
Description of compensating rings Plate 2' 6" x 2' 3" x 1 1/2" No. of Furnaces in each boiler 2  
Side diameter 48" length, top 5' 9" bottom 8' 1/2" thickness of plates 1/2" description of joint Lap 18" dia. if rings are fitted Yes  
Greatest length between rings 5' 9" working pressure of furnace by the rules 81.1 lbs combustion chamber plating, thickness, sides 1 1/2" back 7/16" top 15/32"  
Diameter of stays to ditto, sides 6 1/2" x 7 1/8" back 7 1/2" x 7" top 9" x 9" If stays are fitted with nuts or riveted heads Yes working pressure of plating by rules 81.1 lbs  
Diameter of stays at smallest part 1 3/8" working pressure of ditto by rules 99.4 lbs end plates in steam space, thickness 13/16"  
How stays are secured Nuts & washers working pressure by rules 81.5 lbs diameter of stays at smallest part 2 1/4"  
Working pressure by rules 82.5 lbs Front plates at bottom, thickness 3/4" Back plates, thickness 1/4"  
Greatest pitch of stays 12" working pressure by rules 82.5 lbs Diameter of tubes 3 1/4" pitch of tubes 4 1/2" thickness of tube 1 1/2"  
How stayed Stayed tubes pitch of stays 12 1/2" x 9" width of water spaces 1 1/4"  
Description of longitudinal joint Lap 18" dia. diam. of rivet holes 1 1/2"  
Working pressure of shell by rules 81.1 lbs diameter of flue 18" thickness of plates 1 1/2" If stiffened with rings Yes  
Working pressure by rules 81.1 lbs end plates of superheater, or steam chest; thickness 1 1/2" how stayed Stayed  
Superheater or steam chest; how connected to boiler

SLD947-0144

Lloyd's Register Foundation

DONKEY BOILER—

Description *Donkey 4 can water tubes*  
Made at *Nottingham* by whom made *Rich. Wain*  
Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *940* when made *22/1/83* where fixed *At the Mill*  
valves *Spring* No. of safety valves *Two* area of each *7.07 sq* if fitted with easing gear *Yes* if steam from main boiler  
enter the donkey boiler *No* diameter of donkey boiler *6.6* length *14.0* description of riveting *Long. Lap double air*  
Thickness of shell plates *7/16* diameter of rivet holes *1 1/16* whether punched or drilled *Dr* pitch of rivets *2 1/4* lap of plating *4"*  
percentage of strength of joint *70.4%* thickness of crown plates *9/16* stayed by *Six stay 1 1/2 dia. and drilled*  
Diameter of furnace, top *4.11* bottom *5.8* length of furnace *5.5* thickness of plates *5/16* description of joint *Lap single air*  
Thickness of furnace crown plates *9/16* stayed by *Same as shell crown*  
Working pressure of furnace by rules *80 lbs* diameter of uptake *6"* thickness of plates *7/16* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *Roller, 2 lbs and 1 lb and connecting rod. 6 blades  
set of pins and edge jump rollers, side cutter rollers for air circulating pump, 2  
curving bits 1 set of piston springs. Spare bits for Donkey Plate and eccentric straps, and  
other spare gear. Roll and nut axles and wire of various sizes.*  
The foregoing is a correct description,  
*Richard Wain* Manufacturer. of *Engines and Main Boilers only.*

General Remarks (State quality of workmanship, opinions as to class, &c.)  
*Material and Workmanship good.*  
*The furnace crown plate, back water plate, and comb  
-air chamber plating, of main boiler, are of steel manufactured by  
J. White, Nottingham.*  
*The Machinery and Boilers of the Tread are in good  
order and safe working condition and signify in my opinion, for the  
purpose of L.M.C. II, 83, in the Register Book.*

*It is submitted that this vessel  
is eligible to have the  
notification + sub 6 11.5.3  
revised.*

The amount of Entry Fee .. £ 2: .. received by me,  
Special .. .. £ 21: ..  
Donkey Boiler Fee .. .. £ ..: ..  
Certificate (if required) .. £ ..: ..  
To be sent as per margin.  
(Travelling Expenses, if any, £ 1. 10. )

*AW*  
*James Finney*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute FRIDAY 30 NOV 1883

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