

# REPORT ON MACHINERY.

Port of

Received at London Office **SAI. 14 JUN 1902**

Date, first Survey

Last Survey 19

No. in Survey held at

Reg. Book.

on the *Boiler for J.L. Thompson's SS. No 398.*

*Ramsay* (Number of Visits)

Tons { Gross  
Net

Master

Built at *S Shield*

By whom built *J Eltringham & Co*

When built *1902*

Engines made at

By whom made

when made

Boilers made at

By whom made

when made

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted

Is Electric Light fitted

## ENGINES, &c.—Description of Engines

No. of Cylinders \_\_\_\_\_ No. of Cranks \_\_\_\_\_

Dia. of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ Revs. per minute \_\_\_\_\_ Dia. of Screw shaft \_\_\_\_\_ Lgth. of stern bush \_\_\_\_\_

Dia. of Tunnel shaft \_\_\_\_\_ Dia. of Crank shaft journals \_\_\_\_\_ Dia. of Crank pin \_\_\_\_\_ Size of Crank webs \_\_\_\_\_ Dia. of thrust shaft under \_\_\_\_\_

collars \_\_\_\_\_ Dia. of screw \_\_\_\_\_ Pitch of screw \_\_\_\_\_ No. of blades \_\_\_\_\_ State whether moceable \_\_\_\_\_ Total surface \_\_\_\_\_

No. of Feed pumps \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_

No. of Bilge pumps \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_

No. of Donkey Engines \_\_\_\_\_ Sizes of Pumps \_\_\_\_\_ No. and size of Suctions connected to both Bilge and Donkey pumps \_\_\_\_\_

In Engine Room \_\_\_\_\_ In Holds, &c. \_\_\_\_\_

No. of bilge injections \_\_\_\_\_ sizes \_\_\_\_\_ Connected to condenser, or to circulating pump \_\_\_\_\_ Is a separate donkey suction fitted in Engine room & size \_\_\_\_\_

Are all the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses in Engine room always accessible \_\_\_\_\_ Are the sluices on Engine room bulkheads always accessible \_\_\_\_\_

Are all connections with the sea direct on the skin of the ship \_\_\_\_\_ Are they Valves or Cocks \_\_\_\_\_

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates \_\_\_\_\_ Are the discharge pipes above or below the deep water line \_\_\_\_\_

Are they each fitted with a discharge valve always accessible on the plating of the vessel \_\_\_\_\_ Are the blow off cocks fitted with a spigot and brass covering plate \_\_\_\_\_

What pipes are carried through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times \_\_\_\_\_

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges \_\_\_\_\_

When were stern tube, propeller, screw shaft, and all connections examined in dry dock \_\_\_\_\_ Is the screw shaft tunnel watertight \_\_\_\_\_

*Donkey* fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

## BOILERS, &c.— (Letter for record \_\_\_\_\_) Total Heating Surface of Boilers *172* Is forced draft fitted *No*

No. and Description of Boilers *One single ended Malt* Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs*

Date of test *31.3.02* Can each boiler be worked separately  Area of fire grate in each boiler *24 sq ft* No. and Description of safety valves to each boiler *two direct spring* Area of each valve *3.14* Pressure to which they are adjusted *160 lbs* Are they fitted with easing gear *yes*

Smallest distance between boilers or uptakes and bunkers or woodwork \_\_\_\_\_ Mean dia. of boilers *9'6"* Length *9'6"* Material of shell plates *Steel*

Thickness *7/8"* Range of tensile strength *28-32* Are they welded or flanged  Descrip. of riveting: cir. seams *L. D. R* long. seams *Lapped*

Diameter of rivet holes in long. seams *1 1/16"* Pitch of rivets *4 1/2"* Lap of plates on width of butt straps *9 1/16"*

Per centages of strength of longitudinal joint \_\_\_\_\_ rivets *7/16"* Working pressure of shell by rules *161 lbs* Size of manhole in shell *16" x 12"*

Size of compensating ring *7" x 7/8"* No. and Description of Furnaces in each boiler *2 plain* Material *Steel* Outside diameter *35"*

Length of plain part \_\_\_\_\_ top *6-3"* bottom *6-3"* Thickness of plates \_\_\_\_\_ crown *7/8"* bottom *7/8"* Description of longitudinal joint *D. B. S* No. of strengthening rings *One*

Working pressure of furnace by the rules *160 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *2 1/32"* Back *7/8"* Top *2 1/32"* Bottom *7/8"*

Pitch of stays to ditto: Sides *10 1/2" x 8 1/2"* Back *9 1/2" x 8 1/2"* Top *9 1/2" x 9 1/2"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *163 lbs*

Material of stays *Steel* Diameter at smallest part *1 1/32"* Area supported by each stay *81 sq in* Working pressure by rules *173 lbs* End plates in steam space: \_\_\_\_\_

Material *Steel* Thickness *1 1/16"* Pitch of stays *17" x 19"* How are stays secured *U.N.s & W.s* Working pressure by rules *164 lbs* Material of stays *Steel*

Diameter at smallest part *2 3/32"* Area supported by each stay *306 sq in* Working pressure by rules *165 lbs* Material of Front plates at bottom *Steel*

Thickness *7/8"* Material of Lower back plate *Steel* Thickness *27/32"* Greatest pitch of stays *14 x 9 1/2"* Working pressure of plate by rules *171 lbs*

Diameter of tubes *3 1/2"* Pitch of tubes *4 3/4" x 4 3/4"* Material of tube plates *Steel* Thickness: Front *1 1/16"* Back *25/32"* Mean pitch of stays *14 1/4" x 9 1/2"*

Pitch across wide water spaces *14 1/2"* Working pressures by rules *161 lbs* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *2 plates 5 1/2" x 1 3/8"* Length as per rule *24"* Distance apart *9 5/8"* Number and pitch of Stays in each *1-9 1/2"*

Working pressure by rules *163 lbs* Superheater or Steam chest; how connected to boiler \_\_\_\_\_ Can the superheater be shut off and the boiler worked separately \_\_\_\_\_

holes \_\_\_\_\_ Diameter \_\_\_\_\_ Length \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet \_\_\_\_\_

Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Diameter of flue \_\_\_\_\_ Material of flue plates \_\_\_\_\_ Thickness \_\_\_\_\_

If stiffened with rings \_\_\_\_\_ Distance between rings \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates: Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

Working pressure of end plates \_\_\_\_\_ Area of safety valves to superheater \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_

Is a Report also sent on the Mill of the Ship

Copyable Ink



**DONKEY BOILER—**

No.		Description		When made		Where fixed	
Made at	By whom made						
Working pressure	tested by hydraulic pressure to	No. of Certificate	Fire grate area	Description of safety valves			
No. of safety valves	Area of each	Pressure to which they are adjusted	If fitted with easing gear		If steam from main boilers can enter the donkey boiler		
strength	Descrip. of riveting long. seams	Length	Material of shell plates	Thickness	Range of tensile		
Lap of plating	Per centage of strength of joint	Rivets Plates	Thickness of shell crown plates	Radius of do.	No. of Stays to do.		
Dia. of stays.	Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint		
Thickness of furnace crown plates	Stayed by		Working pressure of shell by rules				
Working pressure of furnace by rules	Diameter of uptake	Thickness of uptake plates	Thickness of water tubes				

**SPARE GEAR.** State the articles supplied:—

The foregoing is a correct description,  
 Manufacturer.

Dates of Survey while building {  
 During progress of work in shops - -  
 During erection on board vessel - -  
 Total No. of visits

Is the approved plan of main boiler forwarded herewith

“ “ “ donkey “ “ “

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

Material of screw shaft Is the screw shaft fitted with a continuous liner the whole length of the stern tube  
 Is the after end of the liner made water tight in the propeller boss If the liner is in more than one length are the joints burned  
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive  
 If two liners are fitted, is the shaft lapped or protected between the liners

*This boiler has been built under Special Survey  
 material & workmanship Good.*

Certificate (if required) to be sent to

The amount of Entry Fee..	£	:	:	When applied for,
Special .. .. .	£	:	:	.....19.....
Donkey Boiler Fee .. .	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	.....19.....

*J. G. MacKillop.*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

TUES. 17 JUN 1902

Committee's Minute

Assigned

