

## REPORT ON MACHINERY.

No. 54210

Port of *Newcastle on Tyne*Received at London Office *FRI. 31 JAN 1908*No. in Survey held at *South Shields*  
Reg. Book. on the *Screw tug "Salvage"*Date, first Survey *9<sup>th</sup> Sep.*Last Survey *2<sup>nd</sup> Jan 1908*(Number of Vents *33*)

Master

Built at *S. Shields*By whom built *J. P. Renoldson & Son*Tons *Gross 111*  
Net *1208*Engines made at *S. Shields*By whom made *J. P. Renoldson & Son*when made *1908*Boilers made at *Jarrow*By whom made *Palmer's Co (Job No 1144)*when made *1907*

Registered Horse Power

Owners *North Shields & Hull Steam Towing Co Ltd*Port belonging to *Goole*Nom. Horse Power as per Section 28 *61*Is Refrigerating Machinery fitted for cargo purposes ☒Is Electric Light fitted ☒

## ENGINES, &amp;c.—Description of Engines

*Inverted Compound*No. of Cylinders *2*No. of Cranks *2*Dia. of Cylinders *16" & 34"*Length of Stroke *22*Revs. per minute *110*Dia. of Screw shaft *as per rule 4.2"*Material of *Iron*Is the screw shaft fitted with a continuous liner the whole length of the stern tube *No liners*

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 *—*Length of stern bush *3'-0"*Dia. of Tunnel shaft *as per rule 6.4"*Dia. of Crank shaft journals *as per rule 6.74"*Dia. of Crank pin *6 3/4"*Size of Crank webs *12 1/2" x 4 1/2"*

Dia. of thrust shaft under

collars *6 3/4"*Dia. of screw *7'-9"*Pitch of Screw *12'-0"*No. of Blades *4*State whether moveable *No*Total surface *19.88*No. of Feed pumps *1*Diameter of ditto *3"*Stroke *11"*Can one be overhauled while the other is at work ☒No. of Bilge pumps *1*Diameter of ditto *3"*Stroke *11"*Can one be overhauled while the other is at work ☒No. of Donkey Engines *1*Sizes of Pumps *4 1/2" x 2 3/4" x 4"*

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *1 - 2" dia*In Holds, &c. *1 Fore hold 2" dia**1 aft " 2" dia*No. of Bilge Injections *1*sizes *2"*Connected to condenser, or to circulating pump *C. P.*Is a separate Donkey Suction fitted in Engine room & size *Yes 2"*Are all the bilge suction pipes fitted with roses *Yes*Are the roses in Engine room always accessible *Yes*Are the sluices on Engine room bulkheads always accessible *Yes*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 *Main & Aux Steam Exhaust pipe*How are they protected *Lagged, w/ wood cased*Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *Yes*Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *Yes*Dates of examination of completion of fitting of Sea Connections *7-1-08*of Stern Tube *28-11-07*Screw shaft and Propeller *7-1-08*Is the Screw Shaft Tunnel watertight ☒Is it fitted with a watertight door ☒worked from ☒

## BOILERS, &amp;c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crucible

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

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

If not, state whether, and when, one will be sent?

If a Report also sent on the Hull of the Ship?

m.44-1.

W1575-0024



# VERTICAL DONKEY BOILER— Manufacturers of Steel

No. \_\_\_\_\_ Description \_\_\_\_\_

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_

Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of Safety \_\_\_\_\_

Valves \_\_\_\_\_ No. of Safety Valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Date of adjustment \_\_\_\_\_

If fitted with easing gear \_\_\_\_\_ If steam from main boilers can enter the donkey boiler \_\_\_\_\_ Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_

Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Descrip. of riveting long. seams \_\_\_\_\_

Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ Plates \_\_\_\_\_

Working pressure of shell by rules \_\_\_\_\_ 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 \_\_\_\_\_

Working pressure of furnace by rules \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_

Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_ Dates of survey \_\_\_\_\_

SPARE GEAR. State the articles supplied:— *1 set each of top & bottom end, main bearing, Coupling and piston bolts, 1 feed & 1 bilge pump valves, assorted iron, bolts & nuts.*

The foregoing is a correct description,

*J. M. Reynolds* Manufacturer. *of engines*

Dates of Survey while building { During progress of work in shops - - - 1907. Sep. 19. 26. Oct. 1. 4. 8. 11. 14. 17. 22. 24. 28. 31. Nov. 6. 8. 11. 14. 18. 1900. 26. 28. Dec. 2. 4. 6. 9. 13. 17. 19. 1908. Jan. 7. 10. 16. 21

{ During erection on board vessel - - -

Total No. of visits *33* Is the approved plan of main boiler forwarded herewith *Yes*

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders *28-11-07* Slides *22-10-07* Covers *17-10-07* Pistons *31-10-07* Rods *21-12-07*

Connecting rods *31-10-07* Crank shaft *14-11-07* Thrust shaft *18-11-07* Tunnel shafts *18-11-07* Screw shaft *18-11-07* Propeller *28-11-07*

Stern tube *28-11-07* Steam pipes tested *23-12-07* Engine and boiler seatings *20-11-07* Engines holding down bolts *17-12-07*

Completion of pumping arrangements *10-1-08* Boilers fixed *7-1-08* Engines tried under steam *15-1-08*

Main boiler safety valves adjusted *15-1-08* Thickness of adjusting washers *P 3/8" S 3/8"*

Material of Crank shaft *S. M. Iron* Identification Mark on Do. *1988 H.T. 9* Material of Thrust shaft *Iron* Identification Mark on Do. *J.F. 5 18-11-07*

Material of Tunnel shafts *Iron* Identification Marks on Do. *J.F. 5 18-11-07* Material of Screw shafts *Iron* Identification Marks on Do. " "

Material of Steam Pipes *Copper welded 3 3/4" dia 408 W.G.* Test pressure *250 LBS*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been built under special survey, the workmanship and material is sound and good and eligible in my opinion to be classed with record of L. M. C. 1-08*

It is submitted that this vessel is eligible for THE RECORD. *L. M. C. 1-08*

*HC 31.1.08*  
*J. S.*  
*31.1.08*

The amount of Entry Fee.. £ *1* : - : - When applied for, *3.0 JAN 1908*

Special .. £ *9* : *3* : -

Donkey Boiler Fee .. £ : : - When received, *3.2.08*

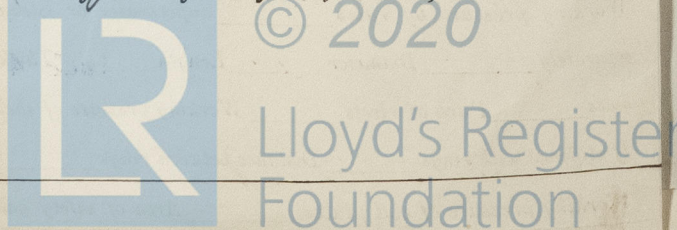
Travelling Expenses (if any) £ : : -

*TUES. 4 FEB 1908*

Committee's Minute

Assigned

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



MACHINERY CERTIFICATE WRITTEN