

# REPORT ON MACHINERY.

No. 55595

Port of *Newcastle on Tyne*

No. in Survey held at *North Shields*

Date, first Survey *July 9*

Received at London Office **THUR. 22 OCT 1908**

Last Survey *14. Oct 1908*

Reg. Book. on the *steel screw steamer "Limesdale"*

(Number of Visits // )

Master

Built at *Hessill - Hull* By whom built *Dobson & Co* (151)

Tons <sup>Gross</sup> <sub>Net</sub> When built *1908*

Engines made at *North Shields*

By whom made *Shield Engineering & Dry Dock Co. Ltd.* when made *1908*

Boilers made at *Newcastle*

By whom made *R. Stephenson & Co. Ltd.* when made *1908*

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28 *61*

Is Refrigerating Machinery fitted for cargo purposes  *no*

Is Electric Light fitted  *yes*

## ENGINES, &c.—Description of Engines *Compound*

No. of Cylinders *two* No. of Cranks *two*

Dia. of Cylinders *16" 34"*

Length of Stroke *22"* Revs. per minute *111*

Dia. of Screw shaft <sup>as per rule</sup> *1.19" 5* <sub>as fitted</sub> *1.78"* Material of *steel* screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube *no - two liners* Is the after end of the liner made water tight in the propeller boss  *yes* 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  *planted* Length of stern bush *2' 8 1/2"*

Dia. of Tunnel shaft <sup>as per rule</sup> *6.6"* <sub>as fitted</sub> Dia. of Crank shaft journals <sup>as per rule</sup> *6.9"* <sub>as fitted</sub> Dia. of Crank pin *7"* Size of Crank webs *4 3/8 x 10 1/2* Dia. of thrust shaft under collars *7"* Dia. of screw *8' 4"* Pitch of Screw *9' 0" mean* No. of Blades *4* State whether moveable *no* Total surface *23.8 sq ft*

No. of Feed pumps *1* Diameter of ditto *2 1/2"* Stroke *13"* Can one be overhauled while the other is at work

No. of Bilge pumps *1* Diameter of ditto *2 1/2"* Stroke *12"* Can one be overhauled while the other is at work

No. of Donkey Engines *one* Sizes of Pumps *Duplex 5 1/4 x 3 1/2 x 5* No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *1 of 2" dia* In Holds, &c. *1 of 2" 19" from peak tank*

No. of Bilge Injections *1* sizes *3"* Connected to condenser, or to circulating pump *C.P.* Is a separate Donkey Suction fitted in Engine room & size *yes 3"*

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

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  How are they protected

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 *2-10-08* of Stern Tube *2-10-08* Screw shaft and Propeller *2-10-08*

Is the Screw Shaft Tunnel watertight  Is it fitted with a watertight door  worked from

## BOILERS, &c.—(Letter for record ) Manufacturers of Steel *J. Shewell & Son*

Total Heating Surface of Boilers *1095* Is Forced Draft fitted  *no* No. and Description of Boilers *1, S.E. Cyl. Multitubular*

Working Pressure *135 lb* Tested by hydraulic pressure to *270 lb* Date of test *13. Y. 08* No. of Certificate *7734*

Can each boiler be worked separately  Area of fire grate in each boiler *34.5 sq ft* No. and Description of Safety Valves to each boiler *two direct Spring* Area of each valve *4.9 sq in* Pressure to which they are adjusted *140 lb* Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork *//* <sup>particulars appended</sup> 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 plate.....

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part <sup>top</sup>..... Thickness of plates <sup>crown</sup>..... Description of longitudinal joint <sup>bottom</sup>..... 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

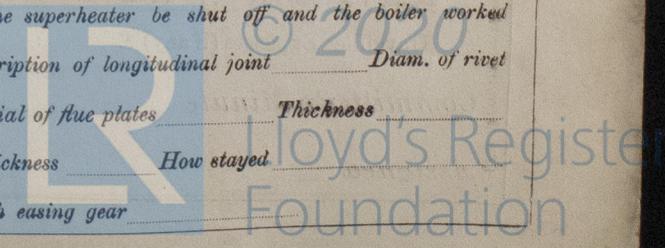
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

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 a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent?



W629-0101

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. \_\_\_\_\_ Description *None fitted*  
 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 So  
 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 <sup>Rivets</sup> \_\_\_\_\_  
 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:— *Two top end bolts & two bottom end bolts & nuts, two main bearing  
 spare coupling bolts, with nuts complete, spare fuel & bilge pump valves assorted iron bolts & nuts*

The foregoing is a correct description,

THE SHIELDS ENGINEERING & DRY DOCK CO., LIMITED.

Manufacturer. *R Richardson*

Dates of Survey while building { During progress of work in shops - - } *1908 July 9. 21. Aug 13. 28. Sep 22. 23. Oct 26. 9. 12. 14.*  
 { During erection on board vessel - - }  
 Total No. of visits //

Is the approved plan of main boiler forwarded herewith *Yes*  
 " " " donkey " " "

Dates of Examination of principal parts—Cylinders *24.7.08* Slides *24.7.08* Covers *24.7.08* Pistons *24.7.08* Rods *24.7.08*  
 Connecting rods *24.7.08* Crank shaft *6-10-08* Thrust shaft *2-10-08* Tunnel shafts  Screw shaft *28.9.08* Propeller *2-10-*  
 Stern tube *2-10-08* Steam pipes tested *7-10-08* Engine and boiler seatings *2-10-08* Engines holding down bolts *7. 10. 08.*  
 Completion of pumping arrangements *9-10-08* Boilers fixed *9-10-08* Engines tried under steam *9-10-08*  
 Main boiler safety valves adjusted *9. 10. 08* Thickness of adjusting washers *Port Valve 3/8" Starboard Valve 3/8"*  
 Material of Crank shaft *Steel* Identification Mark on Do. *2088 ATG* Material of Thrust shaft *Iron* Identification Mark on Do. *2088 A*  
 Material of Tunnel shafts  Identification Marks on Do. \_\_\_\_\_ Material of Screw shafts *Iron* Identification Marks on Do. *2088 A*  
 Material of Steam Pipes \_\_\_\_\_ *Copper* Test pressure *280 lbs at Bellin Graham Wks. N. Chis*

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

*The machinery built under special survey the material and workmanship found good and efficient  
 The machinery fitted up on board tested under steam found satisfactory  
 In my opinion this vessel is eligible for the notation of L.M.C. 10.08*

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 10.08. ELEC LIGHT.

*J.C. 22.10.08*

*J.R.R.*  
*22.10.08*

The amount of Entry Fee. £ 1 : 0 :  
 Special .. .. £ 9 : 3 :  
 Donkey Boiler Fee .. .. £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, *21 OCT 1908*  
 When received, *20.11.08*

*Leonard & Shallcross, & J. Robinson*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

FRI. 23 OCT 1908

Assigned

MACHINERY CERTIFICATE WRITTEN.

*+ L.M.C. 1008  
 elec. light*



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Certificate (if required) to be sent to the Secretary of the Committee (The Surveyors are requested not to write on or below the space for Committee's Minute.)