

REPORT ON MACHINERY.

No. 62072

Received at London Office SAT. APR. 13. 1912

Date of writing Report 19 When handed in at Local Office 10 Port of **NEWCASTLE - ON - TYNE.**

No. in Survey held at **Newcastle** Date, First Survey **30th Oct. 1911** Last Survey **12th Mar 1912**
 Reg. Book. **55** on the **Machinery of the S.S. Elvet** (Number of Vials **28**)

Master **W. Dobson & Co.** Built at **Newcastle** By whom built **W. Dobson & Co.** Tons { Gross **1287**
 Net **673**
 When built **1912**

Engines made at **Newcastle** By whom made **North Eastern Marine Eng. Co.** when made **1912**

Boilers made at **Sunderland** By whom made **"** when made **1912**

Registered Horse Power **201** Owners **Sharp & Co.** Port belonging to **A. Shields**

Nom. Horse Power as per Section 28 **201** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **Yes**

ENGINES, &c.—Description of Engines **Triple** No. of Cylinders **3** No. of Cranks **3**

Dia. of Cylinders **19", 31" & 51"** Length of Stroke **36"** Revs. per minute **114** Dia. of Screw shaft as per rule **11.439"** Material of screw shaft **iron**
 as fitted **12"**

Is the screw shaft fitted with a continuous liner the whole length of the stern tube **no** 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 **Yes** 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 **Yes** If two liners are fitted, is the shaft lapped or protected between the liners **Yes** Length of stern bush **4'-5"**

Dia. of Tunnel shaft as per rule **9.58"** Dia. of Crank shaft journals as per rule **10.06"** Dia. of Crank pin **10 1/4"** Size of Crank webs **20 1/4" x 6 1/4"** Dia. of thrust shaft under collars **10 1/4"** Dia. of screw **13-6"** Pitch of Screw **14-6"** No. of Blades **4** State whether moveable **no** Total surface **56 sq ft**

No. of Feed pumps **2** Diameter of ditto **3"** Stroke **20"** Can one be overhauled while the other is at work **Yes**

No. of Bilge pumps **2** Diameter of ditto **3 1/2"** Stroke **20"** Can one be overhauled while the other is at work **Yes**

No. of Donkey Engines **2** Sizes of Pumps **9" x 11" x 10", 7 1/2" x 9" x 10"** No. and size of Suctions connected to both Bilge and Donkey pumps **3**

In Engine Room **3 of 2"** In Holds, &c. **2 of 2" in each hold and 1 of 2 1/4" in tunnel well**

No. of Bilge Injections **1** sizes **4"** Connected to condenser, or to circulating pump **Yes** Is a separate Donkey Suction fitted in Engine room & size **Yes 2 1/2"**

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 **no**

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 **none** How are they protected **Yes**

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 **2/2/12** of Stern Tube **2/2/12** Screw shaft and Propeller **14/2/12**

Is the Screw Shaft Tunnel watertight **Yes** Is it fitted with a watertight door **Yes** worked from **Upper deck**

BOILERS, &c.—(Letter for record) Manufacturers of Steel **See report on boiler attached**

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

plate. 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 crown Description of longitudinal joint No. of strengthening rings

bottom. 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

191218-0074

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 _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— 1 set of top end & 1 set of bottom end bolts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, a quantity of assorted bolts nuts, and iron, 1 spare propeller & minor parts.

The foregoing is a correct description, **NORTH EASTERN MARINE ENGINEERING Co., LTD.**

Manufacturer. *S. T. Harrison*

1911
 Dates of Survey { During progress of work in shops - - } Oct. 30. Nov. 9. 20. 29. Dec. 1. 7. 8. 11. 12. 14. 27. 28
 { During erection on board vessel - - } 19. 21. 27. Mar. 12.
 building
 Total No. of visits 28

Secretary. *[Signature]* 26. 31. Feb. 1. 2. 9. 12. 14. 1912

Is the approved plan of main boiler forwarded herewith Yes No

“ “ “ donkey “ “ “

Dates of Examination of principal parts—Cylinders 14/12/11 Slides 19/1/11 Covers 1/12/11 Pistons 27/12/11 Rods 18/1/12
 Connecting rods 18/1/12 Crank shaft 9/12/11 Thrust shaft 12/12/11 Tunnel shafts 7/12/11 Screw shaft 29/1/11 Propeller 22/1/12
 Stern tube 22/1/12 Steam pipes tested 19/2/12 Engine and boiler seatings 12/2/12 Engines holding down bolts 16/2/12
 Completion of pumping arrangements 2/2/12 Boilers fixed 16/2/12 Engines tried under steam 2/2/12
 Main boiler safety valves adjusted 21/2/12 Thickness of adjusting washers PF 7/16 A 5/16 SF 3/8 A 7/16

Material of Crank shaft *Steel* Identification Mark on Do. 9/1/12 *66* Material of Thrust shaft *Steel* Identification Mark on Do. 14/12/11 *66*
 Material of Tunnel shafts *Steel* Identification Marks on Do. 11/12/11 *66* Material of Screw shafts *Iron* Identification Marks on Do. 9/1/12 *66*
 Material of Steam Pipes *Solid drawn copper* Test pressure 360 lbs ✓

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

The machinery of this vessel has been built under survey the materials used are good, and the workmanship is satisfactory, it has been properly fitted on board and secured, and the engines have been tried under steam. In my opinion the vessel is eligible to have record of L.M.C. 3.12.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 3.12.

J.W.D.
13/4/12

The amount of Entry Fee .. £ 2 :	When applied for, MAR 30 1912
Special £ 30 : 1 :	When received, APR 4 1912
Donkey Boiler Fee £ 10 :	
Travelling Expenses (if any) £ 22 : 10 :	

Committee's Minute TUE. APR. 16. 1912

Assigned *hmc 3.12*

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



NEWCASTLE ON TYNE

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