

REPORT ON MACHINERY.

No. 62102

Received at London Office FRI. APR. 19. 1912

Date of writing Report 19 When handed in at Local Office 19 Port of **NEWCASTLE-ON-TYNE**
 No. in Survey held at **Newcastle** Date, First Survey **15th Sept 1911** Last Survey **30th March 1912**
 Reg. Book. **5** Ship on the **Machinery of the S.S. Queen Louise** (Number of Visits **47**)
 Master **McDonald** Built at **Newcastle** By whom built **Northumbrian S.B.C.** Tons { Gross **4850** Net **3050** 3139
 Engines made at **Newcastle** By whom made **North Eastern Marine Eng. Co.** When built **1912**
 Builders made at **"** By whom made **"** when made **1912**
 Registered Horse Power **"** Owners **J. Dunlop & Sons** Port belonging to **Glasgow**
 Nom. Horse Power as per Section 28 **436** 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 **26" 42" 42"** Length of Stroke **48"** Revs. per minute **69** Dia. of Screw shaft as per rule **14.55"** Material of screw shaft **iron**
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube **Yes** 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 **5'-6"**
 Dia. of Tunnel shaft as per rule **13.0"** Dia. of Crank shaft journals as per rule **13.65"** Dia. of Crank pin **14"** Size of Crank webs **27 1/2" X 8 1/2"** Dia. of thrust shaft under collars **14"** Dia. of screw **17'-9"** Pitch of Screw **17'-9"** No. of Blades **4** State whether moveable **no** Total surface **100 sq**
 No. of Feed pumps **2** Diameter of ditto **4"** Stroke **26"** Can one be overhauled while the other is at work **Yes**
 No. of Bilge pumps **2** Diameter of ditto **4 1/2"** Stroke **26"** Can one be overhauled while the other is at work **Yes**
 No. of Donkey Engines **3** Sizes of Pumps **8 1/2" X 11" X 10"; 7 1/2" X 4 1/2" X 10"; 5 1/4" X 3 1/4" X 5"** No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room **4 of 3 1/2"** In Holds, &c. **2 of 3 1/2"** in each hold &
1 of 2 1/2" in tunnel well.
 No. of Bilge Injections **1** sizes **6"** Connected to condenser, or to circulating pump **no** Is a separate Donkey Suction fitted in Engine room & size **Yes 3 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 **none**
 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 **19/3/12**
 Is the Screw Shaft Tunnel watertight **Yes** Is it fitted with a watertight door **Yes** worked from **Upper deck**

BOILERS, &c.—(Letter for record **(r)**) Manufacturers of Steel **J. & J. Spencer & Sons**
 Total Heating Surface of Boilers **4356** Is Forced Draft fitted **no** No. and Description of Boilers **3 Single-ended**
 Working Pressure **180 lbs** Tested by hydraulic pressure to **360 lbs** Date of test **14/2/12** No. of Certificate **8272**
 Can each boiler be worked separately **Yes** Area of fire grate in each boiler **67 1/2 sq** No. and Description of Safety Valves to each boiler **2 direct spring** Area of each valve **4.068 sq** Pressure to which they are adjusted **185 lbs** Are they fitted with easing gear **Yes**
 Smallest distance between boilers or uptakes and bunkers or woodwork **1'-9"** Mean dia. of boilers **15'-4 1/2"** Length **11'-9"** Material of shell plates **steel**
 Thickness **1 1/32"** Range of tensile strength **28 1/2 - 32 tons** Are the shell plates welded or flanged **no** Descrip. of riveting: cir. seams **double lap**
 long. seams **2 rivets d. butt** Diameter of rivet holes in long. seams **19/32"** Pitch of rivets **8 1/8"** Lap of plates on width of butt straps **18 1/8"**
 Per centages of strength of longitudinal joint rivets **88** plate **85.6** Working pressure of shell by rules **183 lbs** Size of manhole in shell **16" X 12"**
 Size of compensating ring **flanged** No. and Description of Furnaces in each boiler **3 Lighthous** Material **steel** Outside diameter **49"**
 Length of plain part top **9 1/6"** bottom **9 1/6"** Thickness of plates crown **9 1/6"** bottom **9 1/6"** Description of longitudinal joint **welded** No. of strengthening rings **Yes**
 Working pressure of furnace by the rules **180 lbs** Combustion chamber plates: Material **steel** Thickness: Sides **2 3/32"** Back **2 3/32"** Top **2 3/32"** Bottom **1"**
 Pitch of stays to ditto: Sides **1 1/2" X 8 1/2"** Back **1 1/2" X 8 1/2"** Top **1 1/2" X 8 1/2"** If stays are fitted with nuts or riveted heads **nuts** Working pressure by rules **180 lbs**
 Material of stays **steel** Diameter at smallest part **2.36"** Area supported by each stay **97.37 sq** Working pressure by rules **181 lbs** End plates in steam space: Material **steel** Thickness **1 1/32"** Pitch of stays **22" X 2 1/2"** How are stays secured **d. nut & w.** Working pressure by rules **180 lbs** Material of stays **steel**
 Diameter at smallest part **8.29"** Area supported by each stay **47.3 sq** Working pressure by rules **182 lbs** Material of Front plates at bottom **steel**
 Thickness **1"** Material of Lower back plate **steel** Thickness **2 1/32"** Greatest pitch of stays **14 1/2" X 9 1/2"** Working pressure of plate by rules **189 lbs**
 Diameter of tubes **3 1/4"** Pitch of tubes **4 3/8" X 4 1/2"** Material of tube plates **steel** Thickness: Front **1"** Back **1 1/16"** Mean pitch of stays **9" X 13 1/8"**
 Pitch across wide water spaces **14 1/2"** Working pressures by rules **182 lbs** Girders to Chamber tops: Material **steel** Depth and thickness of girder at centre **9 3/4" X 2 1/2"** Length as per rule **39"** Distance apart **11 1/2"** Number and pitch of stays in each **3, 8 1/8"**
 Working pressure by rules **182.5 lbs** Superheater or Steam chest; how connected to boiler **none** Can the superheater be shut off and the boiler worked separately **Yes** Diameter **Yes** Length **Yes** Thickness of shell plates **Yes** Material **Yes** Description of longitudinal joint **Yes** Diam. of rivet holes **Yes** Pitch of rivets **Yes** Working pressure of shell by rules **Yes** Diameter of flue **Yes** Material of flue plates **Yes** Thickness **Yes**
 If stiffened with rings **Yes** Distance between rings **Yes** Working pressure by rules **Yes** End plates: Thickness **Yes** How stayed **Yes**
 Working pressure of end plates **Yes** Area of safety valves to superheater **Yes** Are they fitted with easing gear **Yes**

W632-0076

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:— *2 top end & 2 bottom end bolts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, a quantity of bolts nuts and assorted iron, 1 propeller & 1 propeller shaft and minor details.*

The foregoing is a correct description,

NORTH EASTERN MARINE ENGINEERING CO., LTD.

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 *Yes*

Dates of Examination of principal parts—Cylinders *4/12/11* Slides *22/2/12* Covers *27/12/11* Pistons *27/12/11* Rods *8/12/11*
 Connecting rods *17/11/11* Crank shaft *3/1/12* Thrust shaft *4/1/12* Tunnel shafts *1/2/12* Screw shaft *27/11/11* Propeller *12/2/12*
 Stern tube *28/1/12* Steam pipes tested *16/2/12* Engine and boiler seatings *21/2/12* Engines holding down bolts *24/3/12*
 Completion of pumping arrangements *26/3/12* Boilers fixed *21/3/12* Engines tried under steam *26/3/12*
 Main boiler safety valves adjusted *26/3/12* Thickness of adjusting washers *from P 3/8" S 1/2" Centre P 5/16" S 7/16" Port P 7/16" S 7/16"*
 Material of Crank shaft *Steel* Identification Mark on Do. *4/1/12* Material of Thrust shaft *Steel* Identification Mark on Do. *4/1/12*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *1/2/12* Material of Screw shafts *Iron* Identification Marks on Do. *28/12/11*
 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 special 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 this vessel is eligible to have the record of L.M.C. 3.12.

It is submitted that
 this vessel is eligible for
 THE RECORD. + LMC 3.12.

Charles Cooper
 19/4/12

The amount of Entry Fee .. £ *3* :
 Special .. £ *41* : *16* :
 Donkey Boiler Fee .. £ :
 Travelling Expenses (if any) £ :
 When applied for, **APR 18 1912**
 When received, *25/4/12*

Committee's Minute TUE. APR 23 1912

Assigned *Home 3.12*

MACHINERY CERTIFICATE
 REGISTERED



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 Foundation

NEWCASTLE ON TYNE

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)