

REPORT ON MACHINERY.

Contract 1903
No. 57466

Port of *Newcastle-on-Tyne*
 No. in Survey held at *Newcastle-on-Tyne* Date, first Survey *13th May* Last Survey *8th Oct* 1909
 Reg. Book. on the *S.S. Steersman* (Number of Visits *33*)

Master Built at *Newcastle* By whom built *Wood Skinner & Co. (No. 162)* When built *1909*
 Engines made at *Newcastle* By whom made *North Eastern Marine Engine Co. Ltd.* When made *1909*
 Boilers made at *Newcastle* By whom made *North Eastern Marine Engine Co. Ltd.* When made *1909*
 Registered Horse Power Owners *C. Rowbottom & Sons* Port belonging to *London*
 Nom. Horse Power as per Section 28 *110* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines *Triple Compound* No. of Cylinders *3* No. of Cranks *3*
 Dia. of Cylinders *15½" - 23" - 41"* Length of Stroke *27"* Revs. per minute *97* Dia. of Screw shaft *as per rule 8.62* 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 *3-0*
 Dia. of Tunnel shaft *as per rule 7.5* Dia. of Crank shaft journals *as per rule 7.875* Dia. of Crank pin *8½"* Size of Crank webs *5½" x 16½"* Dia. of thrust shaft under collars *8½"* Dia. of screw *11-0"* Pitch of Screw *11-6"* No. of Blades *4* State whether moveable *No* Total surface *36"*
 No. of Feed pumps *2* Diameter of ditto *2½"* Stroke *15"* Can one be overhauled while the other is at work *Yes*
 No. of Bilge pumps *2* Diameter of ditto *2½"* Stroke *15"* Can one be overhauled while the other is at work *Yes*
 No. of Donkey Engines *2* Sizes of Pumps *5¼ x 3½ x 5, 6, 7½ x 6"* No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room *three 2½"* In Holds, &c. *two 2½"*

No. of Bilge Injections / sizes *4"* Connected to condenser, or to circulating pump *pump* Is a separate Donkey Suction fitted in Engine room & size *Yes*
 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 *No* 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 *31/8/09* of Stern Tube *6/9/09* Screw shaft and Propeller *6/9/09*
 Is the Screw Shaft Tunnel watertight *No* Is it fitted with a watertight door *Yes* worked from *—*

BOILERS, &c.—(Letter for record *S*) Manufacturers of Steel *Spencer & Co*
 Total Heating Surface of Boilers *1912* Is Forced Draft fitted *No* No. and Description of Boilers *1 Single ended cylindrical*
 Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs* Date of test *30/7/09* No. of Certificate *7880*
 Can each boiler be worked separately *Yes* Area of fire grate in each boiler *53.7 sq ft* No. and Description of Safety Valves to each boiler *1 pair dual spring* Area of each valve *5.94 sq in* Pressure to which they are adjusted *180 lbs* Are they fitted with easing gear *Yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *about 12"* Mean dia. of boilers *14.9"* Length *10' 0"* Material of shell plates *Steel*
 Thickness *1 5/32"* Range of tensile strength *28 3/4 to 32* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *double lap*
 long. seams *butt, both* Diameter of rivet holes in long. seams *1/32"* Pitch of rivets *8 3/8"* Lap of plates or width of butt straps *18"*
 Per centages of strength of longitudinal joint rivets *89.7* Working pressure of shell by rules *182 lbs* Size of manhole in shell *16" x 12"*
 Size of compensating ring *Flanged* No. and Description of Furnaces in each boiler *3 Deighton's* Material *Steel* Outside diameter *46"*
 Length of plain part *top 29.7"* Thickness of plates *bottom 16"* Description of longitudinal joint *Welded* No. of strengthening rings *—*
 Working pressure of furnace by the rules *191* Combustion chamber plates: Material *Steel* Thickness: Sides *23/32"* Back *23/32"* Top *23/32"* Bottom *31/32"*
 Pitch of stays to ditto: Sides *10 1/2" x 9 3/8"* Back *10 3/4" x 9"* Top *10 1/2" x 9 3/8"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *180*
 Material of stays *Steel* Diameter at smallest part *2.03"* Area supported by each stay *99.5 sq in* Working pressure by rules *185 lbs* End plates in steam space: Material *Steel* Thickness *1 5/32"* Pitch of stays *22 1/2" x 25"* How are stays secured *2 1/2" x 10"* Working pressure by rules *180 lbs* Material of stays *Steel*
 Diameter at smallest part *4.62"* Area supported by each stay *361 sq in* Working pressure by rules *180* Material of Front plates at bottom *Steel*
 Thickness *1"* Material of Lower back plate *Steel* Thickness *15/16"* Greatest pitch of stays *14 1/2"* Working pressure of plate by rules *186*
 Diameter of tubes *3 1/4"* Pitch of tubes *4 1/2" x 4 3/8"* Material of tube plates *Steel* Thickness: Front *1"* Back *3/4"* Mean pitch of stays *—*
 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 *4 3/8" x 3 1/4"* Length as per rule *31"* Distance apart *10 1/2"* Number and pitch of stays in each *(2) 9 3/8"*
 Working pressure by rules *185* Superheater or Steam chest; how connected to boiler *No* Can the superheater be shut off and the boiler worked separately *—*
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivets
 Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 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

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. 1 Description Vertical (Sudson's Patent)

Made at By whom made When made Where fixed in Strathfield

Working pressure 180 tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety

Valves Spring loaded No. of Safety Valves 2 Area of each 7² Pressure to which they are adjusted 90 Date of adjustment

If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no 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

Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays Plates

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 & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set of coupling bolts & nuts, 2 fuel pump & 2 bilge pump valves, assorted bolts & nuts and iron of various sizes.

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

Manufacturer.

Dates of Survey while building During progress of work in shops - - Secretary. 1909 May 13.15.20.21. Jun. 4.7.9.15. Jul. 6.15.22.23.25.29.30. Aug. 4.10.17.19.27.30.31. Sep. 1.2.3. 6.10.13.17.21.30. Oct. 7.8.

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

" " " donkey " " " yes

Dates of Examination of principal parts—Cylinders 6/7/09 Slides 10/8/09 Covers 10/8/09 Pistons 10/8/09 Rods 22/7/09

Connecting rods 10/8/09 Crank shaft 18/8/09 Thrust shaft 10/8/09 Tunnel shafts 30/8/09 Screw shaft 10/8/09 Propeller 22/7/09

Stern tube 2/8/09 Steam pipes tested 17/9/09 Engine and boiler seatings 10/9/09 Engines holding down bolts 15/9/09

Completion of pumping arrangements 21/9/09 Boilers fixed 14/9/09 Engines tried under steam 21/9/09

Main boiler safety valves adjusted 21/9/09 Thickness of adjusting washers Port 7/16 SP 1/32

Material of Crank shaft Steel Identification Mark on Do. R.W.P. Material of Thrust shaft Steel Identification Mark on Do. 6682 N.W.C.

Material of Tunnel shafts Iron Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do. R.W.C. 30/8/09

Material of Steam Pipes S.D. Copper Test pressure 360 lbs

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

These engines and boilers have been built under special survey, the materials and workmanship are of good description, they have been well fitted on board and tested under steam.

This machinery is now in my opinion eligible to have notification of LMC 10.09 in the Register Book

It is submitted that this vessel is eligible for THE RECORD. + LMC 10.09.

J.W.D. 19/10/09

The amount of Entry Fee. £ 2 : 0 : When applied for, 16 OCT 1909
Special £ 16 : 10 :
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ : : When received, 19.10.09

Committee's Minute

Assigned

TUES. 19 OCT 1909

+ LMC 10.09

MACHINERY CERTIFICATE WRITTEN

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



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