

REPORT ON MACHINERY.

Port of Sunderland

Received at London Office

MUN. 24 AUG 1908

No. in Survey held at Sunderland

Date, first Survey, 13th March 08 Last Survey 14th April 1908

Reg. Book.

on the S.S. Hampshire

(Number of Visits 57)

Gross 833.11

Net 393.24

Master Henry Lonner Built at Sunderland By whom built Wm J. Brown & Sons

When built 1908

Engines made at Sunderland By whom made North Eastern Marine Engineering when made 1908

Boilers made at Sunderland By whom made Sitto when made 1908

Registered Horse Power 128 Owners Dennis Hill Willey Port belonging to Sunderland

Nom. Horse Power as per Section 28 128 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Inverted triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 16 1/2, 26 1/2, 45 Length of Stroke 33 Revs. per minute 85 Dia. of Screw shaft as per rule 9.27 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 3.12

Dia. of Tunnel shaft as per rule nil Dia. of Crank shaft journals as per rule 8.55 Dia. of Crank pin 8.5 Size of Crank webs 5.5 x 12 Dia. of thrust shaft under collars 8.5

Dia. of screw 11.6 Pitch of Screw 13.6 No. of Blades 4 State whether moveable no Total surface 45

No. of Feed pumps 2 Diameter of ditto 2 3/4 Stroke 15 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 Stroke 15 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 5 1/2 x 3 1/2 x 5 1/2 6 x 7 x 9 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room one of 2 1/2 + one of 3 In Holds, &c. 2 of 2 1/2 to each

No. of Bilge Injections 1 sizes 3 1/2 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 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 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 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 23/6/08 4/7/08 of Stern Tube 23.6.08 Screw shaft and Propeller 4.7.08

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

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Sons

Total Heating Surface of Boilers 2100 Is Forced Draft fitted no No. and Description of Boilers 2 S.E. Cylindrical Multi

Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 22.6.08 No. of Certificate 2708

Can each boiler be worked separately Yes Area of fire grate in each boiler 26 1/2 No. and Description of Safety Valves to each boiler 2 spring

Area of each valve 3.14 Pressure to which they are adjusted 165 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 21 Mean dia. of boilers 11.4 3/8 Length 9.0 Material of shell plates steel

Thickness 13/16 Range of tensile strength 28 3/4/32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d x lap.

long. seams End & S Diameter of rivet holes in long. seams 1 1/32 Pitch of rivets 8 1/2 ~~Gap of plates~~ or width of butt straps 16 1/4

Per centages of strength of longitudinal joint rivets 90.46 Working pressure of shell by rules 160 lbs Size of manhole in shell 16 x 12

Size of compensating ring flanged No. and Description of Furnaces in each boiler 2 plain Material steel Outside diameter 30 3/4

Length of plain part top 5.0 1/16 bottom 5.0 Thickness of plates crown 5/8 bottom 5/8 Description of longitudinal joint weld No. of strengthening rings Yes

Working pressure of furnace by the rules 163.34 Combustion chamber plates: Material steel Thickness: Sides 11/16 Back 3/4 Top 11/16 Bottom 3/4

Pitch of stays to ditto: Sides 7 1/2 x 12 1/2 Back 11 1/4 x 10 1/2 Top 12 1/2 x 7 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 163.5

Material of stays Steel Diameter at smallest part 1 1/2 - 2.1 Area supported by each stay 118.625 Working pressure by rules 160 lbs End plates in steam space:

Material steel Thickness 1 3/16 Pitch of stays 24 1/2 x 15 1/2 How are stays secured d nut Working pressure by rules 160.1 Material of stays steel

Diameter at smallest part 6.1 Area supported by each stay 373.625 Working pressure by rules 170 lbs Material of Front plates at bottom steel

Thickness 3/4 Material of Lower back plate steel Thickness 7/8 Greatest pitch of stays 14 1/2 x 10 1/2 Working pressure of plate by rules 161.46

Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 11 1/4 x 9 1/2

Pitch across wide water spaces 14 1/2 Working pressures by rules 192 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 8 x 1 1/2

Length as per rule 27.5 Distance apart 12 1/2 Number and pitch of stays in each 2 - 7 1/2

Working pressure by rules 166.24 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 Yes

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

310-1721

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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:— 2 Top end, 2 bottom end, 2 Main bearing & 1 set of Coupling bolts, 1 set feed and bilge pump Valves, 1 Main Feed check & 1 donkey feed check Valves, 1 Feed donkey Valves, set of Air and Circulating pump Valves, 12 Junk ring studs, 1 Propeller, bolts & nuts assorted and iron spigots

The foregoing is a correct description,

NORTH EASTERN MARINE ENGINEERING CO. LTD.

Manufacturer.

Walker & Beattie Ltd.
P.M.

Dates of Survey while building	During progress of work in shops—	1906:— April 13, 18, 26, 27, 28, 29, 30, May 1, 6, 7, 11, 15, 19, 22, 25, 27, 29, 30, June 1, 2, 4, 5, 10,
	During erection on board vessel—	12, 16, 17, 18, 22, 23, 26, 30, July 2, 4, 7, 9, 11, 13, 15, 16, 18, 21, 24, 28, 30, Aug: 4, 5, 6, 7, 10, 12, 13, 14,
	Total No. of visits	54

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 16.7.08 Slides 21.7.08 Covers 21.7.08 Pistons 22.7.08 Rods 15.7.08
Connecting rods 24.7.08 Crank shaft 30.7.08 Thrust shaft 30.7.08 Tunnel shafts ✓ Screw shaft 22.6.08 Propeller 7.7.08
Stern tube 18.6.08 Steam pipes tested 8.7.08 Engine and boiler seatings 23.6.08 Engines holding down bolts 11.8.08
Completion of pumping arrangements 13.8.08 Boilers fixed 18.7.08 Engines tried under steam 13.8.08
Main boiler safety valves adjusted 13.8.08 Thickness of adjusting washers P.P. $\frac{5}{16}$, P.S. $\frac{5}{16}$, S.S. $\frac{5}{16}$, S.P. $\frac{5}{16}$
Material of Crank shaft Steel Identification Mark on Do. 482B Material of Thrust shaft steel Identification Mark on Do. 6179 J.M.
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 472B
Material of Steam Pipes Copper Test pressure 400 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. The Machinery of this vessel has been constructed under Special Survey, the workmanship and materials used are both of good quality, the Engines have been tried under steam and worked satisfactorily)

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 8.08.

J.P.S. J.P.C. 24.8.08
24/8/08

I beg to recommend that this vessel is eligible in my opinion to have the record L.M.C. 8.08 in the Register Book

The amount of Entry Fee..	£ 2 : 0 : 0	When applied for,	27.8.08
Special	£ 19 : 4 : 0	When received,	3.9.08
Donkey Boiler Fee	£ : : :		
Travelling Expenses (if any) £	: : :		

B.G. *K.W. Coomber.*
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 25 AUG 1908

Assigned

Thmc 8.08

MACHINER. WRITTEN. 25-8-08

copy 11/8/11



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