

REPORT ON MACHINERY.

New No. 55237.
Old No. 23788.Port of Sunderland

Received at London Office

WED. 5 AUG 1908

TUES. 18 AUG 1908

No. in Survey held at Sunderland
Reg. Book. on the S. S. "Sir Walter Scott"Date, first Survey 24th Dec 1907 Last Survey 28 July 1908(Number of Visits 59)Gross 1164.65Net 885.67

Master

Built at BlythBy whom built Blyth Shipbuilding Co.When built 1908Engines made at SunderlandBy whom made North Eastern Marine Engineering Co.when made 1908Boilers made at SunderlandBy whom made Sittowhen made 1908

Registered Horse Power

Owners J. O. Scott & Co.Port belonging to NewcastleNom. Horse Power as per Section 28 181Is Refrigerating Machinery fitted for cargo purposes noIs Electric Light fitted yes

ENGINES, &c.—Description of Engines

Inverted triple expansionNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 19-31-67Length of Stroke 36"Revs. per minute 75Dia. of Screw shaft 11.05as per rule 11.05Material of ironIs 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 yesLength of stern bush 3' 9"Dia. of Tunnel shaft 8.54as per rule 8.54Dia. of Crank shaft journals 10.05as per rule 10.05Dia. of Crank pin 10 1/4Size of Crank webs 6 1/2 x 15 1/2

Dia. of thrust shaft under

collars 10 1/4Dia. of screw 14.0Pitch of Screw 14.6No. of Blades 4State whether moveable noTotal surface 61 ftNo. of Feed pumps 2Diameter of ditto 3"Stroke 16 1/2"Can one be overhauled while the other is at work yesNo. of Bilge pumps 2Diameter of ditto 3 1/2"Stroke 16 1/2"Can one be overhauled while the other is at work yesNo. of Donkey Engines 2Sizes of Pumps 9 x 11 x 10"5 1/2 x 3 1/2 x 5"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room four of 2 1/2" eachIn Holds, &c. Fore Hold Two of 2 1/2" diamNo. of Bilge Injections 1sizes 3 1/2"Connected to condenser, or to circulating pump yesIs a separate Donkey Suction fitted in Engine room & size yes-2 1/2"Are all the bilge suction pipes fitted with roses yesAre the roses in Engine room always accessible yesAre the sluices on Engine room bulkheads always accessible yesAre all connections with the sea direct on the skin of the ship yesAre they Valves or Cocks bothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yesAre the Discharge Pipes above or below the deep water line aboveAre they each fitted with a Discharge Valve always accessible on the plating of the vessel yesAre the Blow Off Cocks fitted with a spigot and brass covering plate yesWhat pipes are carried through the bunkers noneHow are they protected yesAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesDates of examination of completion of fitting of Sea Connections 18.6.08of Stern Tube 18.7.08Screw shaft and Propeller 18.7.08Is the Screw Shaft Tunnel watertight yesIs it fitted with a watertight door yesworked from Top Rating Engine RoomBOILERS, &c.—(Letter for record S)Manufacturers of Steel J. Spencer & Sons LtdTotal Heating Surface of Boilers 293 ftIs Forced Draft fitted noNo. and Description of Boilers one S.E. Cyl. Mull-2"Working Pressure 180 lbsTested by hydraulic pressure to 360 lbsDate of test 23.4.08No. of Certificate 2699Can each boiler be worked separately yesArea of fire grate in each boiler 72 ft

No. and Description of Safety Valves to

each boiler 2 springArea of each valve 8.29Pressure to which they are adjusted 185 lbsAre they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 1.10Mean dia. of boilers 16.9 1/2Length 11.0Material of shell plates steelThickness 1 1/8Range of tensile strength 28 3/4/32Are the shell plates welded or flanged noDescrip. of riveting: cir. seams d & laplong. seams l & d & sDiameter of rivet holes in long. seams 1 1/32Pitch of rivets 9 1/2Lap of plates or width of butt straps 20"Per centages of strength of longitudinal joint 84.64rivets 84.64plate 85.8Working pressure of shell by rules 180.7 lbsSize of manhole in shell 16 x 12Size of compensating ring 7 x 1 1/8No. and Description of Furnaces in each boiler 4 heightMaterial steelOutside diameter 43 1/2Length of plain part topThickness of plates bottomDescription of longitudinal joint weldNo. of strengthening rings yesWorking pressure of furnace by the rules 180 lbsCombustion chamber plates: Material steelThickness: Sides 3/4Back 25/32Top 3/4Bottom 7/8Pitch of stays to ditto: Sides 8 1/2 x 11 1/2Back 11 1/2 x 10Top 8 1/2 x 11If stays are fitted with nuts or riveted heads nutsWorking pressure by rules 180 lbsMaterial of stays steelDiameter at smallest part 2.43Area supported by each stay 115Working pressure by rules 190.1 lbsEnd plates in steam space: yesMaterial steelThickness 1 1/32Pitch of stays 25 x 22 1/2How are stays secured duxw.Working pressure by rules 180 lbsMaterial of stays steelDiameter at smallest part 9.82Area supported by each stay 564Working pressure by rules 141.6 lbsMaterial of Front plates at bottom steelThickness 13/16Material of Lower back plate steelThickness 13/16Greatest pitch of stays 14 5/8 x 10Working pressure of plate by rules 180 lbsDiameter of tubes 3 1/2Pitch of tubes 4 1/8 x 4 1/2Material of tube plates steelThickness: Front 13/16Back 13/16Mean pitch of stays 10 13/16Pitch across wide water spaces 14 1/2Working pressures by rules 215.7 lbsGirders to Chamber tops: Material steel

Depth and

thickness of girder at centre 8 1/2 x 1 1/2Length as per rule 29.9Distance apart 11Number and pitch of stays in each 2 - 8 1/2Working pressure by rules 182 lbs

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately yes

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes yes

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

yes

yes

yes

yes

yes

yes

VERTICAL DONKEY BOILER—Manufacturers of Steel

No. _____ Description See attached Form

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 of feed & bilge pump Valves, 1 set Air & Circulating pump Valves, 1 Main & 180 feed check valves, 1 Piston spring, 12 Junk ring bolts, Bolts & nuts assorted & iron of eye 1 Propeller

The foregoing is a correct description,
NORTH EASTERN MARINE ENGINEERING CO. LTD.
Malcolm Beatty, Esq. Manufacturer.

1907: _____ 1908: _____

Dates of Survey while building { During progress of work in shops - - } Dec. 27, 30. Jan. 13, 14, 20, 21, 24, 28, 29, 31. Feb. 4, 5, 7, 10, 11, 12, 14, 18, 19, 21, 25, 26, 28. Mar. 2, 4, 6, 9, 12, 13, 16, 18.

{ During erection on board vessel - - } 20, 26. Apr. 2, 7, 10, 14, 16, 23, 27, 29. May 1, 4, 6, 7. June 2, 10, 12, 16, 18, 26, 30. July 2, 7, 16, 18, 21, 24, 28.

Total No. of visits 59. Is the approved plan of main boiler forwarded herewith Yes.

Nov. 22, 24, 27, 29, 30, Dec. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.

Dates of Examination of principal parts—Cylinders 18.2.08 Slides 6.3.08 Covers 31.1.08 Pistons 18.2.08 Rods 18.2.08

Connecting rods 14.2.08 Crank shaft 18.2.08 Thrust shaft 25.2.08 Tunnel shafts 28.1.08 Screw shaft 26.6.08 Propeller 30/12/08

Stern tube 4.2.08 Steam pipes tested 21.7.08 Engine and boiler seatings 12-6.08 Engines holding down bolts 21.7.08

Completion of pumping arrangements 28.7.08 Boilers fixed 21.7.08 Engines tried under steam 28.7.08

Main boiler safety valves adjusted 28.7.08 Thickness of adjusting washers Port 3/8", Star 3/8"

Material of Crank shaft Steel Identification Mark on Do. 443B Material of Thrust shaft Steel Identification Mark on Do. 709 RA

Material of Tunnel shafts Iron Identification Marks on Do. 443B Material of Screw shafts Iron Identification Marks on Do. 474 B

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.

The Report on the Electric Light has been sent to Messrs Siemens Bros & will be forwarded in due course.

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

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

The amount of Entry Fee. £ 2 : 0 : 0 When applied for, _____

Special .. £ 27 : 3 : 0 4. 8. 1908

Donkey Boiler Fee .. £ : : _____

Travelling Expenses (if any) £ : : _____

When received, _____

Committee's Minute FRM. 21 AUG 1908

Assigned

+ Lmc 8.08

K. W. Coomber
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
E. A. Dryden Joyce

MACHINERY CERTIFICATE
WRITTEN.

Lloyd's Register
Foundation