

REPORT ON MACHINERY.

No. 52553

Port of Newcastle

TUES. 24 SEP 1907

Received at London Office

No. in Survey held at Newcastle Date, first Survey June 19 Last Survey 20th Sep 1904
Reg. Book. on the 45 Australian (Number of Visits 19)

Master Schmidt Built at Newcastle By whom built Hawthorn Leslie & Co. Tons { Gross 4009
Net 2575
When built 1904

Engines made at Wallsend By whom made Wallsend Shipbuilding Co. Ltd. when made 1904

Boilers made at " By whom made " when made 1904

Registered Horse Power " Owners W.R. Lundgren Port belonging to Göteborg

Nom. Horse Power as per Section 28 435 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 27 45 74 Length of Stroke 48 Revs. per minute 65 Dia. of Screw shaft as per rule 1 7/8 Material of screw shaft S
as fitted 1 5/8

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 no 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 1/4

Dia. of Tunnel shaft as per rule 13 3/4 Dia. of Crank shaft journals as per rule 14 03 Dia. of Crank pin 14 1/2 Size of Crank webs 20 1/2 x 9 1/2 Dia. of thrust shaft under collars 14 1/2 Dia. of screw 18 1/2 Pitch of Screw 18 1/2 No. of Blades 4 State whether moveable no Total surface 96 sq

No. of Feed pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 24 Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 7 1/2 x 10 1/2 x 10, 7 1/2 x 5 x 6, 6 1/2 x 5 x 6 and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 of 35" In Holds, &c. 2 of 32" in each

No. of Bilge Injections 1 sizes 1 1/2 Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size 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 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 no

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 8 Aug of Stern Tube 8th Aug Screw shaft and Propeller 8th Aug

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record 3) Manufacturers of Steel Spencer & Sons & Co.

Total Heating Surface of Boilers 5620 Is Forced Draft fitted yes No. and Description of Boilers 2 Stk.

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 1. 8. 07. No. of Certificate 7537

Can each boiler be worked separately yes Area of fire grate in each boiler 654 No. and Description of Safety Valves to each boiler 2 Spring Area of each valve 9 1/2 Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 20 Ev. Mean dia. of boilers 16 3/8 Length 11 9 Material of shell plates S

Thickness 1 1/4 Range of tensile strength 29, 33 Are the shell plates welded or flanged yes Descrip. of riveting: cir. seams lap long. seams butt Diameter of rivet holes in long. seams 1 7/16 Pitch of rivets 9 1/8 Lap of plates or width of butt straps 19 1/2

Per centages of strength of longitudinal joint rivets 88.2 plate 85.6 Working pressure of shell by rules 182.95 Size of manhole in shell 16 x 12

Size of compensating ring McNeil's No. and Description of Furnaces in each boiler 3 Deigh Material S Outside diameter 42 1/2

Length of plain part top r bottom r Thickness of plates crown 7 19 bottom 5 32 Description of longitudinal joint weld No. of strengthening rings 1

Working pressure of furnace by the rules 186 Combustion chamber plates: Material S Thickness: Sides 1 1/2 Back 1 1/2 Top 1 1/2 Bottom 1 1/2

Pitch of stays to ditto: Sides 8 1/2 x 10 1/2 Back 9 x 10 Top 9 1/2 x 9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181

Material of stays S Diameter at smallest part 1 1/2 Area supported by each stay 902 Working pressure by rules 181 End plates in steam space: Material S Thickness 1 1/2 Pitch of stays 22 1/2 x 19 1/2 How are stays secured 2 nuts Working pressure by rules 181 Material of stays S

Diameter at smallest part 3 1/2 Area supported by each stay 144 1/2 Working pressure by rules 188 Material of Front plates at bottom S

Thickness 1 Material of Lower back plate S Thickness 1 1/2 Greatest pitch of stays 14 1/2 Working pressure of plate by rules 203

Diameter of tubes 2 1/2 Pitch of tubes 3 1/4 x 3 3/4 Material of tube plates S Thickness: Front 1 Back 3/4 Mean pitch of stays 7 1/2

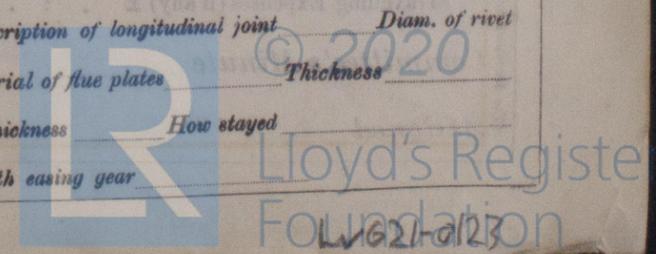
Pitch across wide water spaces 13 Working pressures by rules 360 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 1/2 x 12 Length as per rule 31.5 Distance apart 9 Number and pitch of stays in each 2 @ 9 1/2

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 no

Diameter " Length " Thickness of shell plates 1 1/2 Material S 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 no 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. _____ 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:— 1 set connecting rod bolts & nuts. 1 set main bearing bolts & nuts. 1 set coupling bolts & nuts. 1 set feed & bilge pump valves. 1 set propeller blades. Shaft nuts bolts & assorted iron.

The foregoing is a correct description,
 M. Murray, Manufacturer.

Dates of Survey while building: During progress of work in shops - 1907 June 19, July 2, 4, 8, 11, 15, 16, 24, Aug 2, 8, 9, 12, 19, 26, 28, Sep. 2, 9, 11, 12, 14, 17, 20
 During erection on board vessel -
 Total No. of visits 22

Is the approved plan of main boiler forwarded herewith **yes**
 " " " donkey " " " **yes**
 Dates of Examination of principal parts—Cylinders 19.6.07 Slides 19.6.07 Covers 19.6.07 Pistons 19.6.07 Rods 11.7.07
 Connecting rods 11.7.07 Crank shaft 12.8.07 Thrust shaft 12.8.07 Tunnel shafts 12.8.07 Screw shaft 12.8.07 Propeller 12.8.07
 Stern tube 16.7.07 Steam pipes tested 1st July Engine and boiler seatings 9.9.07 Engines holding down bolts 9.9.07
 Completion of pumping arrangements 20th Sep. Boilers fixed 11.9.07 Engines tried under steam 14.9.07
 Main boiler safety valves adjusted 14.9.07 Thickness of adjusting washers SBf 5/16. 0.11. 5/16. PBF 4/32 aft. 5/16
 Material of Crank shaft **S** Identification Mark on Do. **B JTF** Material of Thrust shaft **S** Identification Mark on Do. **B JTF**
 Material of Tunnel shafts **S** Identification Marks on Do. **B JTF** Material of Screw shafts **B** Identification Marks on Do. **B JTF**
 Material of Steam Pipes **W. J.** Test pressure 540 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c. Machinery & boilers built under special survey; material & workmanship good and efficient; engines & boilers examined under full steam & found satisfactory. In my opinion this vessel is eligible for the record of L.M.C. 9.07.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.07
 Elec. Light FD
 J.R.R.
 24.9.07
 24.9.07

The amount of Entry Fee.. £ 3 : :
 Special £ 41 : 15 :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 21.9.07
 When received, 25.9.07

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

Committee's Minute
 Assigned + L.M.C. 9.07
 F.D. Elec. Light
 MACHINERY CERTIFICATE WRITTEN.



Glasgow - on - 1907

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