

# REPORT ON MACHINERY.

No. 55920  
MUN. 28 DEC 1908

Port of Newcastle

Received at London Office

No. in Survey held at Newcastle Date, first Survey Feb. 17 Last Survey Dec 19<sup>th</sup> 1908  
 Reg. Book. on the S/s Cheyenne (Number of Vests 31)  
 Master J. McDonald Built at Newcastle By whom built Swan Hunter & Co. Ltd Tons Gross 4987 Net 3015 When built 1908  
 Engines made at Newcastle By whom made Wallsend Shipway & Eng 6<sup>th</sup> when made 1908  
 Boilers made at - By whom made " when made 1908  
 Registered Horse Power - Owners Anglo American Oil Co. Ltd Part belonging to Newcastle  
 Nom. Horse Power as per Section 28 440 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines 3 in CRD No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 26.43.72 Length of Stroke 48 Revs. per minute 67 Dia. of Screw shaft as per rule 14.68 Material of screw shaft S  
 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 ✓ 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 ✓ Length of stern bush 5'6"  
 Dia. of Tunnel shaft as per rule 13.81 Dia. of Crank shaft journals as per rule 13.68 Dia. of Crank pin 14.4 Size of Crank webs 29 1/2 x 9 1/2 Dia. of thrust shaft under collars 14 1/2 Dia. of screw 18 1/2 Pitch of Screw 17.9 No. of Blades 4 State whether moveable M Total surface 98 1/4  
 No. of Feed pumps Neil's Diameter of ditto 7 Stroke 9 1/2 x 18 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 2 Sizes of Pumps 6 x 8 1/2 x 6, 7 1/2 x 5 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 of 8 1/2 In Holds, &c. oil pumps. 3  
 No. of Bilge Injections 1 sizes 7 Connected to condenser, or to circulating pump CR 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 ✓  
 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 about  
 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 ✓  
 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 4.11.08 of Stern Tube 4.11.08 Screw shaft and Propeller 4.11.08  
 Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Spencer & Sons Ltd  
 Total Heating Surface of Boilers 7500 sq ft Forced Draft fitted no No. and Description of Boilers 4 S.E.  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 28.7.08 No. of Certificate 7739  
 Can each boiler be worked separately yes Area of fire grate in each boiler 53 sq ft No. and Description of Safety Valves to each boiler 2 Spring Area of each valve 5.93 sq in 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 about 2 1/2 ft dia. of boilers 14' 3" Length 11' 0" Material of shell plates S  
 Thickness 1 1/8" Range of tensile strength 292, 33 1/2 Are the shell plates welded or flanged both Descrip. of riveting: cir. seams d. lap long. seams d. butts Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 8" Gap of plates or width of butt straps 9 1/4"  
 Per centages of strength of longitudinal joint rivets 91.8 plate 85.15 Working pressure of shell by rules 187 Size of manhole in shell 16" x 12"  
 Size of compensating ring McNeil's No. and Description of Furnaces in each boiler 3 Morris's Material S Outside diameter 3' 7"  
 Length of plain part top ✓ bottom ✓ Thickness of plates crown 1 1/2" bottom 3/2" Description of longitudinal joint Weld No. of strengthening rings ✓  
 Working pressure of furnace by the rules 219 Combustion chamber plates: Material S Thickness: Sides 3/2" Back 3/2" Top 3/2" Bottom 3/8"  
 Pitch of stays to ditto: Sides 8 1/4 x 7 1/8 Back 8 x 7 Top 8 1/4 x 8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 225  
 Material of stays S Diameter at smallest part 2.03" Area supported by each stay 56.8 Working pressure by rules 207 End plates in steam space: Material S Thickness 1 1/2" Pitch of stays 21 x 19 1/4 How are stays secured d nuts Working pressure by rules 213 Material of stays S Diameter at smallest part 9.8 Area supported by each stay 415.5 Working pressure by rules 246 Material of Front plates at bottom S Thickness 1" Material of Lower back plate S Thickness 1/2" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 254  
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates S Thickness: Front 1" Back 3/4" Mean pitch of stays 9"  
 Pitch across wide water spaces 14" Working pressures by rules 249 Girders to Chamber tops: Material S Depth and thickness of girder at centre 9 1/4 x 1 1/2 Length as per rule 35 5/8 Distance apart 8 Number and pitch of stays in each 3 @ 8 1/4"  
 Working pressure by rules 195 Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked separately ✓ Diameter - Length - Thickness of shell plate - Material - Description of longitudinal joint - Diam. of rivet holes - Pitch of rivets - Working pressure of shell by rules No 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 -



**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 valves for wear pumps, 1 set bilge pumps, spare tail shaft, loose blades, nuts bolts & iron.

The foregoing is a correct description,  
 FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED,  
 Manufacturer.

Dates of Survey while building	During progress of work in shops—	1908. Mar. 17. 22. Apr. 27. 29. June 15. 18. July 27. 17. 27. 28. 29. Aug. 07. Sep. 11. 14. Oct. 16. 18. 21. 23. Nov. 4. 5. 12. 16.
	During erection on board vessel—	Aug. 20. 23. 25. 27. Dec. 25. 27. 11. 19.
	Total No. of visits	38

Is the approved plan of main boiler forwarded herewith YOS  
 " " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 27. 8. 08 Slides 27. 8. 08 Covers 27. 7. 08 Pistons 27. 7. 08 Rods 27. 7. 09  
 Connecting rods 27. 7. 08 Crank shaft 15. 10. 08 Thrust shaft 15. 10. 08 Tunnel shafts ✓ Screw shaft 1. 11. 08 Propeller 1. 11. 08  
 Stern tube 1. 11. 08 Steam pipes tested 12. 8. 08 Engine and boiler seatings 4. 11. 08 Engines holding down bolts 12. 11. 08  
 Completion of pumping arrangements 14. 12. 08. Boilers fixed 12. 11. 08. Engines tried under steam 8. 12. 08.  
 Main boiler safety valves adjusted 8. 12. 08. Thickness of adjusting washers PBp 1/4 3/4, SBp 1/4 3/4, PBp 5/16 5/16, SBp 11/32 3/4  
 Material of Crank shaft S Identification Mark on Do. B J F Material of Thrust shaft S Identification Mark on Do. B J F  
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts S Identification Marks on Do. B J F  
 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; Materials & workmanship good. Engines & boilers examined under full steam & found satisfactory. It is submitted that this vessel is eligible for the record of L.M.C. 12/08.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 12.08. etc. Light

J.R.R. H.D.  
 28/12/08 28/12/08

The amount of Entry Fee..	£ 3 :	When applied for,
Special .. .. .	£ 42 :	19 Dec 1908
Donkey Boiler Fee .. .	£ :	When received,
Travelling Expenses (if any) £	:	22 Dec 1908

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

Committee's Minute TUES 29 DEC 1908  
 Assigned + L.M.C. 12.08 etc. light

MACHINERY CERTIFICATE WRITTEN



Certificate (if required) to be sent to the Secretary to the Committee's Minute.