

REPORT ON MACHINERY.

No. 62532

Received at London Office

TUE. JUN. 25. 1912

Date of writing Report 20th June 1912 When handed in at Local Office 21st June 1912 Port of Newcastle on Tyne
 No. in Survey held at Newcastle Date, First Survey 8th Sept Last Survey 21st June 1912
 Reg. Book 147 the Machinery of the S.S. Comanche Number of Visits 55 Tons { Gross 5588
 Master Built at Newcastle By whom built Armstrong Whitworth When built 1912
 Engines made at Newcastle By whom made N. E. Marine Eng. Co. when made 1912
 Boilers made at " By whom made " when made 1912
 Registered Horse Power " Owners Anglo American Oil Co. Ltd Port belonging to Newcastle
 Nom. Horse Power as per Section 28 505 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Quadruple No. of Cylinders 4 No. of Cranks 4
 Dia. of Cylinders 23", 32 1/2", 47" x 68" Length of Stroke 48 Revs. per minute 75 Dia. of Screw shaft as per rule 14 1/4" Material of screw shaft iron
 as fitted 15 1/2"
 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 ✓ If two
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5'-5"
 Dia. of Tunnel shaft as per rule 12 1/4" Dia. of Crank shaft journals as per rule 13 3/8" Dia. of Crank pin 13 7/8" Size of Crank webs 28 1/4" x 8 1/2" Dia. of thrust shaft under
 collars 13 7/8" Dia. of screw 17'-6" Pitch of Screw 17'-3" No. of Blades 4 State whether moveable no Total surface 104 sq ft
 No. of Feed pumps 2 Weirs Diameter of ditto 8" 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 26" Can one be overhauled while the other is at work Yes ✓
 No. of Donkey Engines 2 Sizes of Pumps 7 1/2" x 5" x 6" & 6" x 8" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 5 of 3 1/2" dia In Holds, &c. 2 of 3 1/2" dia in gross bunker &
oil cargo pumps
 No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size Yes 2 of 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 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 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 28/5/12 of Stern Tube 28/5/12 Screw shaft and Propeller 29/5/12
 Is the Screw Shaft Tunnel watertight no Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Sons
 Total Heating Surface of Boilers 4377 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 3 Single-ended
 Working Pressure 220 lbs Tested by hydraulic pressure to 440 lbs Date of test 16/4 & 6/5/12 No. of Certificate 8303 & 8312
 Can each boiler be worked separately Yes Area of fire grate in each boiler 54.4 sq ft No. and Description of Safety Valves to
 each boiler 2 direct spring Area of each valve 7.26 sq in Pressure to which they are adjusted 225 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 1'-10 1/2" Mean dia. of boilers 15'-0" Length 12'-0" Material of shell plates steel
 Thickness 1 1/2" Range of tensile strength 28 3/4 - 32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d. r. lap
 long. seams d. r. d. laps Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10" Lap of plates or width of butt straps 21 3/4"
 Per centages of strength of longitudinal joint rivets 87.6 Working pressure of shell by rules 234.2 lbs Size of manhole in shell 16" x 12"
 plate 85.0
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Suspension Material steel Outside diameter 3'-10"
 Length of plain part top Thickness of plates bottom 1 1/16" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 246 lbs Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 1 1/16"
 Pitch of stays to ditto: Sides 8" x 8" Back 8" x 8" Top 8" x 8" If stays are fitted with nuts or riveted heads no Working pressure by rules 254 lbs
 Material of stays steel Diameter at smallest part 1 7/8" Area supported by each stay 64 sq in Working pressure by rules 243 lbs End plates in steam space:
 Material steel Thickness 1 1/32" Pitch of stays 21" x 15 1/4" How are stays secured d. n. r. w Working pressure by rules 224 lbs Material of stays steel
 Diameter at smallest part 8 29/32" Area supported by each stay 320.25 Working pressure by rules 268 lbs Material of Front plates at bottom steel
 Thickness 1 1/8" Material of Lower back plate steel Thickness 1 1/32" Greatest pitch of stays 16" x 8" Working pressure of plate by rules 230 lbs
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 3/4" Material of tube plates steel Thickness: Front 1 1/8" Back 1 3/16" Mean pitch of stays 7 1/2"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 220 lbs Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 9 3/8" x 2" Length as per rule 36" Distance apart 8" Number and pitch of stays in each 3, 8"
 Working pressure by rules 222 lbs 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 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 ✓

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



