

REPORT ON MACHINERY.

Port of Sunderland

Received at London Office

10 OCT 1902

No. in Survey held at SunderlandDate, first Survey 21st March, 01 Last Survey 12th Sept. 1902

Reg. Book.

(Number of Visits 18)on the Steam Screw Steamer "King Edward"Tons { Gross 206
Net 7

Master

Built at North ShieldsBy whom built Smith Dock Co. Ltd (691)When built 1902Engines made at SunderlandBy whom made MacColl & Pollock (49)when made 1902Boilers made at SunderlandBy whom made MacColl & Pollock (49)when made 1902

Registered Horse Power

Owners Dodds Steam Fishing Co.Port belonging to North ShieldsNom. Horse Power as per Section 28 71Is Refrigerating Machinery fitted noIs Electric Light fitted noENGINES, &c.—Description of Engines Triple ExpansionNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 12" 20" 32" Length of Stroke 23 Revs. per minute 120 Dia. of Screw shaft 7.17 Lgth. of stern bush 2-6 3/4Dia. of Tunnel shaft 6.09 Dia. of Crank shaft journals 6.39 Dia. of Crank pin 7 Size of Crank webs 11x4 1/2 Dia. of thrust shaft undercollars 7 Dia. of screw 8' 4" Pitch of screw 10' 6" No. of blades 4 State whether moveable no Total surface 28.5 sq ftNo. of Feed pumps 1 Diameter of ditto 2 1/4 Stroke 1 1/2 Can one be overhauled while the other is at work ✓No. of Bilge pumps 1 Diameter of ditto 2 1/4 Stroke 1 1/2 Can one be overhauled while the other is at work ✓No. of Donkey Engines one Sizes of Pumps 5 1/4 x 3 1/2 x 5 Duplex No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 2 of 2" one 2 1/2 g sector - connected In Holds, &c. two 2"to all tanksNo. of bilge injections 1 sizes 3 1/2 Connected to condenser, or to circulating pump CP Is a separate donkey suction fitted in Engine room & size 4 1/2 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 ✓Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks ValvesAre 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 aboveAre 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 yesWhat pipes are carried through the bunkers Slush & Hot Suctions How are they protected Forward Bulkhead CeilingAre 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 yesWhen were stern tube, propeller, screw shaft, and all connections examined in dry dock examined Is the screw shaft tunnel watertight ✓Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—

(Letter for record 3)Total Heating Surface of Boilers 1352 sq ftIs forced draft fitted noNo. and Description of Boilers one S.E. G.L. Multitubular Working Pressure 180 lb Tested by hydraulic pressure to 360 lbDate of test 8.9.02 Can each boiler be worked separately ✓ Area of fire grate in each boiler 35.2 sq ft No. and Description of safety valves toeach boiler two direct spring Area of each valve 3.97 sq in Pressure to which they are adjusted 185 lb Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 11 Mean dia. of boilers 18' 0 Length 10' 0 Material of shell plates steelThickness 1 Range of tensile strength 29 1/2-32 Are they welded or flanged no Descrip. of riveting: cir. seams D. R. Cap long. seams M. R. D.B.Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 7.52 Inp. of plates 13 7/8 width of butt straps 13 7/8Per centages of strength of longitudinal joint 87.6 rivets 85.8 plate Working pressure of shell by rules 185 lb Size of manhole in shell 16 x 12Size of compensating ring 26 x 24 x 1 No. and Description of Furnaces in each boiler 2 Purves Material steel Outside diameter 42 1/2Length of plain part top 14 1/2 Thickness of plates bottom 14 1/2 Description of longitudinal joint weld No. of strengthening rings ✓Working pressure of furnace by the rules 189 lb Combustion chamber plates: Material steel Thickness: Sides 19 1/2 Back 19 1/2 Top 19 1/2 Bottom 13 1/16Pitch of stays to ditto: Sides 9 1/4 x 6 1/2 Back 7 1/4 x 7 1/4 Top 8 If stays are fitted with nuts or riveted heads nuts C. Ch Working pressure by rules 184 lbMaterial of stays steel Diameter at smallest part 1.5 Area supported by each stay 8 1/4 x 8 Working pressure by rules 180 lb End plates in steam space:Material steel Thickness 3 1/2 Pitch of stays 17 7/8 x 12 How are stays secured D. R. x 10 Working pressure by rules 185 lb Material of stays steelDiameter at smallest part 4.11 Area supported by each stay 17 7/8 x 12 Working pressure by rules 191 lb Material of Front plates at bottom steelThickness 7/8 Material of Lower back plate steel Thickness 3/4 Greatest pitch of stays 12 1/4 Working pressure of plate by rules 185 lbDiameter of tubes 3 1/2 Pitch of tubes 4 7/8 x 4 3/4 Material of tube plates steel Thickness: Front 7/8 Back 7/8 Mean pitch of stays 13 7/8 x 9 1/2Pitch across wide water spaces 14 1/2 Working pressures by rules 240 lb Girders to Chamber tops: Material steel Depth andthickness of girder at centre 6 1/4 x 3 1/4 x 2 Length as per rule 21 1/4 Distance apart 8 1/4 Number and pitch of Stays in each one of 8' pitchWorking pressure by rules 182 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler workedseparately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivetholes ✓ 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 ✓

© 2021

Lloyd's Register
Foundation

006467-006478-0048

DONKEY BOILER— No. Description *None*

Made at _____ By whom made _____ When made _____ Where fixed _____
Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____
No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ 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 _____ 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 _____ Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____
Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *Two 1/4" end bolts and nuts two bottom end bolts
and nuts, two main bearing bolts and nuts spare coupling bolt and nuts
spare feed and bilge pump valves. assorted iron bolts and nuts—
spare propeller.*

The foregoing is a correct description,

Macoll & Pollock Manufacturer.

Dates of Survey while building { During progress of work in shops— 1901.— Mar 21. June 20. 21. Oct 2. 18. 24. Nov. 9. 15. 19. Dec 20. 1902.— June 13. 19. Aug 26. 27
During erection on board vessel — Sep. 6. 8. 10. 12.
Total No. of visits 18.

Is the approved plan of main boiler forwarded herewith *no*
retained for duplicate
" " " donkey " " "

General Remarks (State quality of workmanship, opinions as to class, &c.)

Material of screw shaft *and iron* Is the screw shaft fitted with a continuous liner the whole length of the stern tube *two thin liners*
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 *Painted*

*The machinery built under Special Survey the material
and workmanship found good and efficient
The boiler and main steam pipe tested under hydraulic
pressure to 360 lb and found sound and efficient
The Engines tried under steam at their working pressure and
found satisfactory—*

*In my opinion this vessel is worthy of the notation of
L. M. C. 9.02 to be made in the Register Book—*

It is submitted that
this vessel is eligible for
THE RECORD — L. M. C. 9.02

The amount of Entry Fee. £ 1 : :
Special £ 10 : 13 :
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ : :
When applied for, 7.10.02
When received, 11.10.02

Leonard Hallcross
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

TUES. 14 OCT 1902

MACHINERY CERTIFICATE
WRITTEN



© 2021

Lloyd's Register
Foundation