

REPORT ON MACHINERY

Std. No. 22505
New No. 49823

Port of Sunderland

Received at London Office

1905. 19 DEC 1905

No. in Survey held at Sunderland
Reg. Book.

Date, first Survey 27th June 1905 Last Survey 31st October 1905
(Number of Visits 19)

on the S. S. Langland
Master Smith

Gross Tons 240
Net Tons 72
When built 1905

Built at North Shields By whom built Smiths Dock Co. L^{td}

Engines made at Sunderland By whom made New Mac Coll & Pollock L^{td} when made 1905

Boilers made at Sunderland By whom made New Mac Coll & Pollock L^{td} when made 1905

Registered Horse Power _____ Owners Heron Steam Trawling Co. Port belonging to Swarsea

Nom. Horse Power as per Section 28 78 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Inverted triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12 1/2", 20", 34" Length of Stroke 24 Revs. per minute 100 Dia. of Screw shaft 7 3/8" Material of screw shaft steel

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 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 Yes Length of stern bush 2' 6 1/4"

Dia. of Tunnel shaft 6 3/8" Dia. of Crank shaft journals 6 1/8" Dia. of Crank pin 6 7/8" Size of Crank webs 10 3/4" x 4 1/2" Dia. of thrust shaft under collars 6 7/8" Dia. of screw 9' 3" Pitch of screw 12' 0" No. of blades 4 State whether moveable no Total surface 34 sq ft

No. of Feed pumps one Diameter of ditto 2 3/4" Stroke 12" Can one be overhauled while the other is at work Yes

No. of Bilge pumps one Diameter of ditto 2 3/4" Stroke 12" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 5 1/2" x 3 1/2" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps one of 2" in fore hold

In Engine Room 2 7 2" In Holds, &c. one of 2" in fore hold

No. of bilge injections 1 sizes 3" Connected to condenser, or to circulating pump no Is a separate donkey suction fitted in Engine room & size 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 suction to fore hold How are they protected wood casing

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock New Vessel Is the screw shaft tunnel watertight Yes

Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 1423 sq ft Is forced draft fitted Yes

No. and Description of Boilers one cylindrical built single ended Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 12/10/05 Can each boiler be worked separately Yes Area of fire grate in each boiler 38 sq ft No. and Description of safety valves to each boiler 2 sprung Area of each valve 3.98 sq in Pressure to which they are adjusted 185 for 180 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 12' 6" Length 10' 6" Material of shell plates steel

Thickness 1 1/2" Range of tensile strength 28 1/2/32 Are they welded or flanged no Descrip. of riveting: cir. seams d. r. lap. long. seams d. r. double butt lap

Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 7 7/8" Lap of plates or width of butt straps 15 3/4"

Per centages of strength of longitudinal joint rivets 91.01 Working pressure of shell by rules 183.6 lbs Size of manhole in shell 16 x 12"

Size of compensating ring 7 1/2" x 1 1/2" No. and Description of Furnaces in each boiler 2 plain Material S Outside diameter 48"

Length of plain part 7 1/2" Thickness of plates 1 1/2" Description of longitudinal joint weld No. of strengthening rings one

Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 7/16"

Pitch of stays to ditto: Sides 9" x 10" Back 9 3/4" x 9" Top 9 1/2" x 7 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 183.3

Material of stays steel Diameter at smallest part 1.63" Area supported by each stay 89 sq in Working pressure by rules 183.3 lbs End plates in steam space: Material steel Thickness 1 1/4" Pitch of stays 20 1/2" x 18 1/2" How are stays secured double nut Working pressure by rules 181.1 lbs Material of stays steel

Diameter at smallest part 3.04" Area supported by each stay 385 sq in Working pressure by rules 188.6 lbs Material of Front plates at bottom steel

Thickness 1 3/16" Material of Lower back plate steel Thickness 1 3/16" Greatest pitch of stays 12 1/4" Working pressure of plate by rules 191.7 lbs

Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates steel Thickness: Front 1 3/16" Back 1 3/16" Mean pitch of stays 11 1/4"

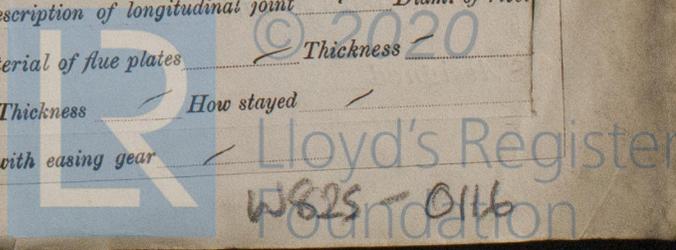
Pitch across wide water spaces 14 1/4" Working pressures by rules 210 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 9 1/2" x 1 1/2" Length as per rule 31 1/2" Distance apart 9 1/2" Number and pitch of Stays in each 2 - 8 1/2"

Working pressure by rules 182.3 lbs 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 _____ 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 _____

If not, state whether, and when, one will be sent

Is a Report also sent on the Hull of the Ship?



WS625-0116

DONKEY BOILER— No. _____ Description _____
 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:— *2 Top end, 2 bottom end, 2 Main bearing & 1 set of coupling bolts, 1 set of feed and bilge pump Valves, 1 propeller, 1 set air & circulating pump Valves, 1 Main feed & 1 donkey feed check Valves, Bolts & nuts assorted & iron of sizes*

The foregoing is a correct description, **MAO COLL & POLLOCK, LTD**
 Manufacturer. *Henry MacColl*
Managing Director

Dates of Survey while building { During progress of work in shops - - } 1905:— *June 27, July 20, Aug. 2, 14, 21, Sept. 4, 21, 26, 29, Oct. 2, 4, 6, 9, 13, 17, 20, 25, 29, 31*
 { During erection on board vessel - - } _____
 Total No. of visits *19* Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " " "

General Remarks (State quality of workmanship, opinions as to class, &c. *The Machinery for 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 & worked satisfactorily, the Main steam pipes have been tested to 400 lbs and proved satisfactory under test*)

*We beg to recommend that this vessel is eligible in our opinion to have the record **L.M.C. 1005** in the Register Book*

It is submitted that this vessel is eligible for THE RECORD L.M.C. 1005

Paul
19.12.05
19.12.05

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

The amount of Entry Fee. £ 1 : : When applied for, _____
 Special £ 11 : 14 : } 7. 11. 19.05
 Donkey Boiler Fee £ : : }
 Travelling Expenses (if any) £ : : } 11. 11. 19.05
 FRI. 22 DEC 1905

Committee's Minute _____
 Assigned *+ Lmb 1003*

Gundelund.

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

