

REPORT ON MACHINERY

Id. No. 22566
Nwc. No. 4985

Port of Sunderland

Received at London Office
Nwc. 19 Dec: 1905
Last Survey 5th December 1905

No. in Survey held at
eg. Book.

Sunderland

Date, first Survey 21st September 05

(Number of Visits 21)

on the

S.S. "New Pioneer"

Gross Tons 710
Net Tons 311
When built 1905

Master

G.M. Green

Built at Newcastle

By whom built W. Dobson & Co.

Engines made at

Sunderland

By whom made Messrs Mac Coll & Pollock

when made 1905

Boilers made at

Sunderland

By whom made Messrs Mac Coll & Pollock

when made 1905

Registered Horse Power

Owners Co-operative Wholesale Society Ltd Port belonging to Manchester

Com. Horse Power as per Section 28 133

Is Refrigerating Machinery fitted for cargo purposes NO

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Inverted, triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders

16", 27", 44"

Length of Stroke 30" Revs. per minute

Dia. of Screw shaft as per rule 9.38" as fitted 9.54"

Material of screw shaft Iron

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners Is the after end of the liner made water tight

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 3.6"

Dia. of Tunnel shaft as per rule 8.08" as fitted 8.31" Dia. of Crank shaft journals as per rule 8.48" as fitted 8.31" Dia. of Crank pin 8.25" Size of Crank webs 5.25" x 13" Dia. of thrust shaft under

collars 8.15" Dia. of screw 10.9" Pitch of screw 14.6" No. of blades 4 State whether moveable no Total surface 51 sq ft

No. of Feed pumps 2 Diameter of ditto 5" Stroke 12" Can one be overhauled while the other is at work Yes - Woodcock independent feed pumps fitted

No. of Bilge pumps 2 Diameter of ditto 2.5" Stroke 16" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 5.25" x 3.25" x 5" x 6" x 6" x 6" No. and size of Suctions connected to both Bilge and Donkey-pumps

In Engine Room 4 of 2" In Holds, &c. In both holds - two 2"

Tunnel Well Dia 2.25"

No. of bilge injections one size 4" Connected to condenser, or to circulating pump no Is a separate donkey suction fitted in Engine room & size 3"

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 nil How are they protected Yes

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 Is the screw shaft tunnel watertight Yes

Is it fitted with a watertight door Yes worked from top platform

BOILERS, &c.—

(Letter for record 7) Total Heating Surface of Boilers 2294 sq ft Is forced draft fitted no

No. and Description of Boilers 2 S.E. Cylindrical Multitubular Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 15.11.05 Can each boiler be worked separately Yes Area of fire grate in each boiler 61 sq ft No. and Description of safety valves to

each boiler 2 Spring Area of each valve 3.14 sq ft 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 2.8" Mean dia. of boilers 11.6" Length 10' 0" Material of shell plates Steel

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

Diameter of rivet holes in long. seams 1.75" Pitch of rivets 6.25" Lap of plates or width of butt straps 12.25"

Per centages of strength of longitudinal joint rivets 80.65 Working pressure of shell by rules 181.2 lbs Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 1" No. and Description of Furnaces in each boiler 2 - plain Material steel Outside diameter 38"

Length of plain part top 6.0" bottom 6.0" Thickness of plates crown 13/32 Description of longitudinal joint weld No. of strengthening rings 1

Working pressure of furnace by the rules 189.9 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 9.25" x 9.25" Back 10.25" x 10.25" Top 8.25" x 10.25" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181 lbs

Material of stays steel Diameter at smallest part 1.59" x 1.63" Area supported by each stay 97.26 sq in Working pressure by rules 182.6 lbs End plates in steam space:

Material steel Thickness 17/32" Pitch of stays 22.25" x 14.25" How are stays secured double nuts Working pressure by rules 183.7 lbs Material of stays steel

Diameter at smallest part 2.53" x 2.77" Area supported by each stay 327 sq in Working pressure by rules 186.5 lbs Material of Front plates at bottom steel

Thickness 13/16" Material of Lower back plate steel Thickness 13/16" Greatest pitch of stays 12.25" Working pressure of plate by rules 203 lbs

Diameter of tubes 3.25" Pitch of tubes 4.25" x 4.25" Material of tube plates steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 11.25"

Pitch across wide water spaces 13.25" Working pressures by rules 236 lbs Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 9.25" x 1.25" Length as per rule 29.75" Distance apart 10.5" Number and pitch of Stays in each 2 - 8.25"

Working pressure by rules 188 lbs Superheater or Steam chest; how connected to boiler — 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 —

DONKEY BOILER— No. *None* 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. _____
Plates _____
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 and one set of coupling bolts, 1 set feed and bilge pump valves, Bolts & nuts assorted and iron of sizes, 1 Propeller shaft, 1 main feed check valve, Propeller*

The foregoing is a correct description,

MAO OOLL & POLLOCK, LTD

Manufacturer.

John MacColl
Managing Director

Dates of Survey while building { During progress of work in shops - - } *25 Sept. 21, 26, 29, Oct. 2, 4, 6, 9, 13, 17, 20, 25, 28, Nov. 2, 8, 13, 17, 22, 25, 29, 30, Dec. 5*
{ During erection on board vessel - - }
Total No. of visits *21*

Is the approved plan of main boiler forwarded herewith *Yes*

" " " donkey " " " *None*

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 main steam pipes have been tested to twice the working pressure with satisfactory results, the engines have been tried under steam and worked satisfactorily.*

*We beg to recommend that this vessel is eligible in our opinion to have the record **L.M.C. 12.06.** in the Register Book*

It is submitted that this vessel is eligible for THE RECORD **L.M.C. 12.05 ELEC: LIGHT.**

J.H. Heck
21.12.05
John H Heck

R.W. Coomber
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee.. £ *2* : : When applied for, _____
Special £ *19* : *19* : } *14.12.05*
Donkey Boiler Fee £ : : }
Travelling Expenses (if any) £ : : } *16.12.05*

Committee's Minute

FRI. 22 DEC 1905

Assigned

*+ L.M.C. 12.05
Elec Light*

NULL CERTIFICATE WRITTEN.



© 2021

Lloyd's Register Foundation

Certificate (if required) to be sent to _____

(The Surveyors are requested not to write on or below the space for Committee's Minute.)