

REPORT ON MACHINERY

THUR. 21 DEC 1905

Id. No. 22566

Nwc. No. 4985

THUR. 21 DEC 1905

Port of Sunderland

Received at London Office

Nwc. 19 Dec: 1905

Last Survey 5th December 1905

(Number of Visits 21)

No. in Survey held at Sunderland
eg. Book.

Date, first Survey 21st September 05

on the

S.S. "New Pioneer"

Tons { Gross 710
Net 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 9.34

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

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 3.6"

Dia. of Tunnel shaft

as per rule 8.08
as fitted 8.3/8"

Dia. of Crank shaft journals

as per rule 8.45"
as fitted 8.3/8"

Dia. of Crank pin

8.1/2"

Size of Crank webs

5.1/2" x 13"

Dia. of thrust shaft under

collars 8.1/2"

Dia. of screw

10.9"

Pitch of screw

14.6"

No. of blades

4

State whether moveable

no

Total surface

51.5

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

2.1/2"

Stroke

16"

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" 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 2.1/4"

No. of bilge injections

one

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room & size 1/2" - 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 Y)

Total Heating Surface of Boilers

2294.7

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

61.5

No. and Description of safety valves to

each boiler

2 Spring

Area of each valve

3.14

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

20.3/32

Are they welded or flanged

no

Descrip. of riveting: cir. seams

d.r. lap

long. seams

d.r. double butt strap

Diameter of rivet holes in long. seams

1.3/16"

Pitch of rivets

6.2"

Lap of plates or width of butt straps

12.1/4"

Per centages of strength of longitudinal joint

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"
bottom 6"

Thickness of plates

8.3/32

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

9.2" x 9.2"

Back

10.4" x 10.4"

Top

10.5" x 10.5"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

183.7 lbs

Material of stays

steel

Diameter at smallest part

1.59" x 1.63"

Area supported by each stay

27.4

Working pressure by rules

183.7 lbs

Material of stays

steel

Material

steel

Thickness

1.7/32"

Pitch of stays

22.3/4" x 14.3/4"

How are stays secured

double nuts

Working pressure by rules

183.7 lbs

Diameter at smallest part

2.53" x 2.57"

Area supported by each stay

32.7

Working pressure by rules

183.7 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

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. _____
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 COLL & POLLOCK, LTD

Manufacturer.

Henry 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.

The amount of Entry Fee.. £ *2* : : When applied for,
Special £ *19* : *19* : *14.12.1905*
Donkey Boiler Fee £ : : When received,
Travelling Expenses (if any) £ : : *16.12.05*

Ed. MacColl
21.12.05
*John H Heck.**R. W. Coomber.*
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. 22 DEC 1905

Assigned

*+ L.M.C. 12.05
Elec. Light*FULL CERTIFICATE
WRITTEN.

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Lloyd's Register
Foundation