

REPORT ON MACHINERY.

No. 22119

Port of *Sunderland*Received at London Office *SAT. 25 MAR 1905*No. in Survey held at *Sunderland*
Reg. Book.Date, first Survey *4th Octr; '04* Last Survey *17 January 1905*(Number of Visits *30*)

on the

*S. S. "Pouvoir"*Tons *Gross 990*
*Net 555*When built *1905*

Master

Built at *Montrose*By whom built *Montrose Shipbuilding Co.*

Engines made at

Sunderland

By whom made

North Eastern Marine Engineering Co. Ltd.

When made

1905

Boilers made at

Sunderland

By whom made

North Eastern Marine Engineering Co. Ltd.

When made

1905

Registered Horse Power

Owners

J. Power & Co.

Port belonging to

London

Nom. Horse Power as per Section 28

125.6

Is Refrigerating Machinery fitted

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 *16" 25" 42"*Length of Stroke *33"*Revs. per minute *70*Dia. of Screw shaft *as per rule 9.98*Material of *Iron*

Is the screw shaft fitted with a continuous liner, the whole length of the stern tube

No

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

No

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

*No*Length of stern bush *3' 4"*Dia. of Tunnel shaft *as per rule 8.16*Dia. of Crank shaft journals *as per rule 5.68*Dia. of Crank pin *8 3/4"*Size of Crank webs *5 1/2" x 13 1/2"*

Dia. of thrust shaft under

collars *8 3/4"*Dia. of screw *12' 0"*Pitch of screw *12' 9"*No. of blades *4*State whether moveable *No*Total surface *44.5 sq ft*No. of Feed pumps *2*Diameter of ditto *2 3/4"*Stroke *15"*

Can one be overhauled while the other is at work

*Yes*No. of Bilge pumps *2*Diameter of ditto *3"*Stroke *15"*

Can one be overhauled while the other is at work

*Yes*No. of Donkey Engines *2*Sizes of Pumps *6" x 7" x 9"**5" x 3" x 4 1/2"*

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

2 of 2"

In Holds, &c.

*2 of 2"*No. of bilge injections *one* sizes *3 1/2"*

Connected to condenser, or to circulating pump

*Yes*Is a separate donkey suction fitted in Engine room & size *Yes 2 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

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

When were stern tube, propeller, screw shaft, and all connections examined

in dry dock 22/12/05

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

*Yes*Engines fitted *Afr-*

BOILERS, &c.—

(Letter for record *S*)

Total Heating Surface of Boilers

2154 sq ft

Is forced draft fitted

No

No. and Description of Boilers

2 Single ended Cylindrical Mult

Working Pressure

180 lbs

Tested by hydraulic pressure to

Date of test *29/12/04* Can each boiler be worked separately*Yes*

Area of fire grate in each boiler

32.5 sq ft

No. and Description of safety valves to

each boiler

2 spring

Area of each valve

3.97 sq ft

Pressure to which they are adjusted

185 lbs for 180 lbs

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

3' 0"

Mean dia. of boilers

11' 10"

Length

Thickness

1"

Range of tensile strength

29/32

Are they welded or flanged

No

Descrip. of riveting: cir. seams

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

6 7/8"

Lap of plates or width of butt straps

13 1/2"

Per centages of strength of longitudinal joint

rivets *82.6*plate *81.1*

Working pressure of shell by rules

180.3

Size of manhole in shell

16" x 12"

Size of compensating ring

Flanged

No. and Description of Furnaces in each boiler

2 plain

Material

Steel

Outside diameter

Length of plain part

top 7' 0 1/2"

Thickness of plates

bottom 7' 0 1/2"

Description of longitudinal joint

weld

No. of strengthening rings

Working pressure of furnace by the rules

180 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

1/16"

Back

1/16"

Top

Pitch of stays to ditto: Sides

10 7/8" x 5 1/2"

Back

9 7/8" x 9"

Top

8 1/2" x 9 1/4"

If stays are fitted with nuts or riveted heads

Material of stays

Steel

Diameter at smallest part

1.79"

Area supported by each stay

88.16 sq in

Working pressure by rules

181.2 lbs

End plates in steam space:

Material

Steel

Thickness

1 1/2"

Pitch of stays

18 1/2" x 18 1/4"

How are stays secured

nut & wash

Working pressure by rules

Diameter at smallest part

6-1"

Area supported by each stay

328.5 sq in

Working pressure by rules

186.6 lbs

Material of Front plates at bottom

Steel

Thickness

13/16"

Material of Lower back plates

Steel

Thickness

27/32"

Greatest pitch of stays

13 3/4" x 9"

Working pressure of plate by rules

182.2 lbs

Diameter of tubes

3 1/2"

Pitch of tubes

5" x 5 1/2"

Material of tube plates

Steel

Thickness: Front

13/16"

Back

13/16"

Mean pitch of stays

Pitch across wide water spaces

14 1/2"

Working pressures by rules

215.2 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

7 3/4" x 1 3/4"

Length as per rule

29"

Distance apart

9 1/4"

Number and pitch of Stays in each

2 - 8 1/2"

Working pressure by rules

189 lbs

Superheater or Steam chest; how connected to boiler

Yes

Can the superheater be shut off and the boiler worked

separately

Yes

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Yes

Diameter of flue

Material of flue plates

Thickness

Yes

How stayed

If stiffened with rings

Yes

Distance between rings

Working pressure by rules

Yes

End plates: Thickness

Yes

How stayed

Working pressure of end plates

Yes

Area of safety valves to superheater

Yes

Are they fitted with easing gear

Yes

W 559-0013

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 Plates 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 Coupling bolts, 1 set of feed & bilge pump valves, Bolts & nuts assorted & iron of sizes, 1 propeller, 6 junk ring bolts.

The foregoing is a correct description,
NORTH EASTERN MARINE ENGINEERING CO. LTD. Manufacturer.
Walter Smith

Dates { During progress of work in shops - 1904:— Oct 4, 11, 19, 24, 27, Nov: 7, 9, 14, 16, 22, 24, 25, 28, 30, Dec: 3, 6, 8, 9, 14
 of Survey { During erection on board vessel - 20, 21, 28, 29, 30 - 1905:— Jan: 5, 7, 11, 12, 13, 17,
 while building { Total No. of visits 30

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " Yes

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 ahead & astern, and worked well, the Steam pipes have been tested to twice the working pressure and proved satisfactory, the safety Valves were adjusted under steam and worked well

I beg to recommend that this vessel, in ^{our} opinion, is eligible to have the record **L.M.C. 1.05** in the Register Book

It is submitted that
 this vessel is eligible for
THE RECORD **L.M.C. 1.05.**

Ex. 27.3.05
ms. 27.3.05

The amount of Entry Fee. £ 2: : When applied for, 19: 1: 1905
 Special £ 18: 15: :
 Donkey Boiler Fee £ : : When received, 25/3/05
 Travelling Expenses (if any) £ : : 24/1/05

K. R. Coombes & W. Morrison
 Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Assigned
 TUES. 28 MAR 1905
 + L.M.C. 1.05

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