

REPORT ON MACHINERY.

No. 54806

RECEIVED FROM
SURVEYOR.

29 JUN 1904

Port of *Liverpool*

Received at London Office

SAT. 16 JUL 1904

No. in Survey held at
Reg. Book.*Northwich*Date, first Survey *3 Sept 03* Last Survey *22nd June 1904*(Number of Visits *12*)

on the

*Steel screw steamer "LONSDALE"*Master *Thos. Kingley*

Built at

Northwich

By whom built

W. J. Yarwood

Engines made at

Northwich

By whom made

W. J. Yarwood

Boilers made at

do

By whom made

do

Registered Horse Power

39

Owners

Whitkaven & Son of Manchester

Port belonging to

Whitkaven

Nom. Horse Power as per Section 28

39

Is Refrigerating Machinery fitted

No

Is Electric Light fitted

*No*Gross
Tons
Net
When builtwhen made *1904*when made *1904*

ENGINES, &c.—Description of Engines

Compound surface condensing

No. of Cylinders

2

No. of Cranks

2

Dia. of Cylinders

14 1/8 & 28 1/2

Length of Stroke

21

Revs. per minute

120

Dia. of Screw shaft

6.5

Material of

Iron

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

26 1/4

Dia. of Tunnel shaft

as per rule

Dia. of Crank shaft journals

*as per rule**5.95*

Dia. of Crank pin

6.25

Size of Crank webs

8 x 4 1/2

Dia. of thrust shaft under

collars

6.25

Dia. of screw

7 ft

Pitch of screw

9-6"

No. of blades

4

State whether moveable

Yes

Total surface

15.2 sq

No. of Feed pumps

One

Diameter of ditto

2 1/4

Stroke

10 1/2

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

One

Diameter of ditto

2 1/4

Stroke

10 1/2

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

One

Sizes of Pumps

6 x 4 x 6 duplex

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

In Engine Room

*Three**2"*

In Holds, &c.

*One**2"*

No. of bilge injections

1

sizes

3"

Connected to condenser, or to circulating pump

Yes

Is a separate donkey suction fitted in Engine room & size

Yes 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

None

Are all connections with the sea direct on the skin of the ship

Yes

Are they Valves or Cocks

Valves and Cocks

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

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

Yes

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

724.32 sq

Is forced draft fitted

No

No. and Description of Boilers

One Cylindrical Multitubular

Working Pressure

120 lb

Tested by hydraulic pressure to

240 lb

Date of test

15/4/04

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

40 sq

No. and Description of safety valves to

each boiler

2 Spring loaded

Area of each valve

9.62 sq

Pressure to which they are adjusted

120 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

10 1/2"

Mean dia. of boilers

10 ft

Length

9-6"

Material of shell plates

Steel

Thickness

1 1/16

Range of tensile strength

27 to 32

Are they welded or flanged

Double riveted

Descrip. of riveting: cir. seams

Double riveted

long. seams

Double riveted

rivets

Double riveted

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

4 1/2"

Lap of plates or width of butt straps

15"

Per centages of strength of longitudinal joint

81.3

Working pressure of shell by rules

123 lb

Size of manhole in shell

16" x 12"

Size of compensating ring

1 1/2

No. and Description of Furnaces in each boiler

Two plain

Material

Steel

Outside diameter

3-5 3/16

Length of plain part

6-0"

Thickness of plates

1 1/16

Description of longitudinal joint

welded

No. of strengthening rings

1/2 ring

Working pressure of furnace by the rules

126 lb

Combustion chamber plates: Material

Steel

Thickness: Sides

9/16"

Back

9/16"

Top

9/16"

Bottom

1 1/32"

Pitch of stays to ditto: Sides

8 1/2 x 8 1/2

Back

9 x 9

Top

7 3/4 x 8 1/2

Are stays fitted with nuts or riveted heads

Nuts

Working pressure by rules

151 lb

Material of stays

Steel

Diameter at smallest part

1.39"

Area supported by each stay

81 sq

Working pressure by rules

146 lb

End plates in steam space:

Material

Steel

Thickness

1 1/16"

Pitch of stays

15" x 15"

How are stays secured

Nuts

Working pressure by rules

175 lb

Material of stays

Steel

Diameter at smallest part

1.93"

Area supported by each stay

225 sq

Working pressure by rules

130

Material of Front plates at bottom

Steel

Thickness

1 1/16"

Material of Lower back plate

Steel

Thickness

1 1/16"

Greatest pitch of stays

14" x 9"

Working pressure of plate by rules

129 lb

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/16"

Material of tube plates

Steel

Thickness: Front

1 1/16"

Back

1 1/16"

Mean pitch of stays

11 7/8"

Pitch across wide water spaces

14 3/8"

Working pressures by rules

182 lb

Girders to Chamber tops: Material

Steel

Depth and

8 1/2"

thickness of girder at centre

6 1/2 x 1 1/4

Length as per rule

2-2

Distance apart

7 3/4"

Number and pitch of Stays in each

*Two**8 1/2"*

Working pressure by rules

141 lb

Superheater or Steam chest; how connected to boiler

Yes

Can the superheater be shut off and the boiler worked

Yes

separately

Yes

Diameter

Yes

Length

Yes

Thickness of shell plates

Yes

Material

Yes

Description of longitudinal joint

Yes

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:— *Two piston rod top end bolts and nuts, Two bottom end bolts and nuts. Two main bearing bolts, one set of coupling bolts. One set of bilge and feed pump valves. Assorted bolts and nuts and iron of various sizes.*

The foregoing is a correct description,

Manufacturer.

W. J. Garwood

Dates of Survey while building { During progress of work in shops - - } 1903. Sept 3. Oct 16. Nov 3 Dec 15. 31. 1904. Jan 20. Mar 25. April 15. 29.
 { During erection on board vessel - - } May 3. June 9. 22.
 Total No. of visits 12.

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

" " " donkey " " "

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

The engines and boiler of this vessel have been built under special survey, and in accordance with the plans approved by the Committee, the material and workmanship is of good quality. The boiler has been tested both under hydraulic pressure and steam and the machinery examined under working conditions, and is now in my opinion eligible to have the notation L.M.C. 6-04 now recorded.

It is submitted that this vessel is eligible for THE RECORD

L.M.C. 6-04

ms
18.7.04

ES
18.7.04

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

The amount of Entry Fee.. £ 1 : 0 : 0 When applied for, 5 JUL 1904
 Special .. £ 8 : 0 : 0
 Donkey Boiler Fee .. £ 3 : 14 : 6 When received, 4.4.04
 Travelling Expenses (if any) £ : : : 19..

J. H. Ashton
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute LIVERPOOL. 15 JUL 1904

Assigned

L.M.C. 6-04

MACHINERY CERTIFICATE
 WAITEN. 19/7



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 Foundation