

REPORT ON MACHINERY.

No. 14555.

Received at London Office MON. AUG. 31. 1914

Writing Report 26. 8.

When handed in at Local Office 29. 8.

Port of

Leith

Survey held at

Lith

Date, First Survey 2nd June, 1913 Last Survey 28th August, 1914.

Book.

on the S/s "Chakdara"

(Number of Visits 39)

Gross 3035.00.

Net 1581.35.

When built 1914

Built at Lith

By whom built Namay & Ferguson Ltd

Machinery made at Lith

By whom made Namay & Ferguson Ltd

when made 1914

Machinery made at Lith

By whom made Namay & Ferguson Ltd

when made 1914

Rated Horse Power

Owners The British India Steam Navigation Co. Ltd.

Port belonging to Glasgow.

Horse Power as per Section 28

668

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

MACHINERY, &c.—Description of Engines

Triple

No. of Cylinders 3

No. of Cranks 3

Diameter of Cylinders 24", 40", 70"

Length of Stroke 48"

Revs. per minute 80

Dia. of Screw shaft as per rule 14.15"

Material of screw shaft Steel

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

propeller boss

No

If the liner is in more than one length are the joints burned

Yes

If the liner does not fit tightly at the part

in the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

Yes

If two

are fitted, is the shaft lapped or protected between the liners

Length of stern bush 4'-10"

Tunnel shaft

as per rule 13.23"

Dia. of Crank shaft journals

as per rule 13.89"

as fitted 13.8"

Dia. of Crank pin

14"

Size of Crank webs 9 3/4" x 9 3/4"

Dia. of thrust shaft under

14"

Dia. of screw

16-3"

Pitch of Screw

19-3"

No. of Blades

4

State whether moveable

Yes

Total surface

85.5'

Feed pumps

2

Diameter of ditto

5"

Stroke

24"

Can one be overhauled while the other is at work

Yes

Bilge pumps

2

Diameter of ditto

5"

Stroke

24"

Can one be overhauled while the other is at work

Yes

Donkey Engines 2 Duplex

Sizes of Pumps

7x5x8, 8x11x12

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

In Holds, &c. 2 in No. 1, 3" 2 in No. 2, 3" 2 in No. 3, 3"

Engine Room

Four

3"

In Tunnel

Will

2 1/2"

Bilge Injections

1

sizes

9"

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

Yes

3 1/2"

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

connections with the sea direct on the skin of the ship

Yes

Are they Valves or Cocks

Yes

Are the Discharge Pipes above or below the deep water line

Below

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes

How are they protected

—

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Yes

of examination of completion of fitting of Sea Connections

15/5/14

of Stern Tube

16/5/14

Screw shaft and Propeller

15/5/14

Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from Upper Platform

MACHINERY, &c.—(Letter for record

S)

Manufacturers of Steel

L. Burdett & Co.

Jas. Dunlop & Co.

Is Forced Draft fitted

Yes

No. and Description of Boilers

4 Single End

Heating Surface of Boilers

10870 sq

Is Forced Draft fitted

Yes

No. and Description of Boilers

4 Single End

Working Pressure

215 lbs

Tested by hydraulic pressure to

430 lbs

Date of test

31/1/14, 27/2/14

No. of Certificate

713, 715

Can boiler be worked separately

Yes

Area of fire grate in each boiler

67.8 sq

No. and Description of Safety Valves to

2 Spring valves

Area of each valve

9.6 sq

Pressure to which they are adjusted

216 lbs

Are they fitted with easing gear

Yes

Minimum distance between boilers or uptakes and bunkers or woodwork

12"

Mean dia. of boilers

15-6"

Length

11-6"

Material of shell plates

S

Range of tensile strength

30-34

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Lap butt

Diameter of rivet holes in long. seams

1 1/32"

Pitch of rivets

10 1/2"

Top of plates or width of butt straps

23 1/2"

Stages of strength of longitudinal joint

rivets 85

Working pressure of shell by rules

236

Size of manhole in shell

17x13

Compensating ring

No. and Description of Furnaces in each boiler

4 Morrison

Material

S

Outside diameter

41 1/4"

of plain part

top

Thickness of plates

crown 1 1/8"

Description of longitudinal joint

Lap

No. of strengthening rings

31

Working pressure of furnace by the rules

230

Combustion chamber plates: Material

S

Thickness: Sides

1 1/8"

Back

1 1/8"

Top

1 1/8"

Bottom

3 1/2"

of stays to ditto: Sides

9x7 1/4"

Back

9 1/8x7 1/4"

Top

9 3/4x7 1/4"

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules

226

Diameter at smallest part

203"

Area supported by each stay

729"

Working pressure by rules

253

End plates in steam space:

Material

S

Thickness

1 1/8"

Pitch of stays

17x14"

How are stays secured

Nuts & washers

Working pressure by rules

224

Material of stays

S

Diameter at smallest part

6.10"

Area supported by each stay

238"

Working pressure by rules

266

Material of Front plates at bottom

S

Material of Lower back plate

S

Thickness

7/8"

Greatest pitch of stays

13"

Working pressure of plate by rules

286

Pitch of tubes

2 1/2"

Pitch of tubes

3 3/4x3 3/4"

Material of tube plates

S

Thickness: Front

7/8"

Back

1 1/8"

Mean pitch of stays

7 1/2x7 1/2"

across wide water spaces

13 1/2"

Working pressures by rules

329

Girders to Chamber tops: Material

S

Depth and

Distance apart

9 3/4"

Number and pitch of stays in each

3

7 1/4"

Distance apart

11x1 3/4"

Length as per rule

34"

Distance apart

9 3/4"

Number and pitch of stays in each

3

7 1/4"

Working pressure by rules

220

Superheater or Steam chest; how connected to boiler

—

Can the superheater be shut off and the boiler worked

—

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

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

—

—

—

—

—

2000-0027

IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded? —

SPARE GEAR. State the articles supplied:—Two top end and two bottom end connecting rod bolts and nuts, two main bearing bolts, one set coupling bolts, one set pin and hilt pump valves, assorted bolts and nuts, 200 of various sizes, one propeller shaft, 2 propeller blades, 1 air pump bucket and rod, 1 pair bottom end brasses.

The foregoing is a correct description.
RAMAGE & FERGUSON, Limited.

Wm. J. Ramage
ENGINEERING MANAGER

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - 1913 June 2/13 July 9 August 1/28 September 4 October 4 9 14 24 November 6 14 December 3 10 15 16 27.
During erection on board vessel - - - 1914 January 12 19 31 February 2 13 18 24 March 2 20 April 24 May 15 28 June 6 25 July 13 28 30 August 3 25 26 27 28 29 30 September 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Total No. of visits 39.

Is the approved plan of main boiler forwarded herewith 410 n

Dates of Examination of principal parts—Cylinders 7/10 24/10 6/11 17/11 Slides 9/10 17/10/13 Covers 4/9 4/10/13 Pistons 12/6 1/8 4/9 4/10 4/10/13 Rods 7/7 1/8 4/9 4/10
Connecting rods 4/9 4/10/13 Crank shaft 17/10 17/11/13 Thrust shaft 4/9 4/10/13 Tunnel shafts 24/9 6/11 16/12/13 Screw shaft 27/11 15/12/14 Propeller 24/10/13 19/11/14
Stern tube 2/2 2/3 20/3/14 Steam pipes tested 25/5 13/7/14 Engine and boiler seatings 25/6/14 Engines holding down bolts 25/6 7/7/14
Completion of pumping arrangements 30/7/14 Boilers fixed 30/7/14 Engines tried under steam 26/8/14
Main boiler safety valves adjusted 3/8/14 Thickness of adjusting washers 7th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th
Material of Crank shaft Stm Identification Mark on Do. 313 GAH Material of Thrust shaft Stm Identification Mark on Do. 313 GAH
Material of Tunnel shafts Stm Identification Marks on Do. 313 GAH Material of Screw shafts Stm Identification Marks on Do. 313 GAH
Material of Steam Pipes Stm Test pressure 645 lb

Is an installation fitted for burning oil fuel No

Is the flash point of the oil to be used over 150°F. —

Have the requirements of Section 49 of the Rules been complied with —

Is this machinery duplicate of a previous case No

If so, state name of vessel —

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

The machinery of this vessel has been built under special survey, the materials and workmanship are sound and good and under the vessel ship in my opinion to have record of + L.M.C. 8. 14.

It is submitted that
this vessel is eligible for

THE RECORD. + L.M.C. 8. 14. F.D.

J.M. J.W.D.

31/8/14

The amount of Entry Fee ... £ 3 : : When applied for, 29/8/14
Special ... £ 53 : 6 : :
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : : :
When received, 29/8/14

TUE. SEP-1, 1914

Committee's Minute

Assigned

L.M.C. 8. 14.
F.D.

G. A. N. K.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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Foundation