

REPORT ON MACHINERY.

No. 38870

Received at London Office

JUL 2 1919

Date of writing Report

10

When handed in at Local Office

30/6/19 Port of Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey 14/11/19

Last Survey 20th June 1919

on the

Twin SS "NUDDA" (Standard)

Master

Built at Glasgow

By whom built

Barclay Curle & Co. Ltd. 60564 When built 1919

Engines made at

Glasgow

By whom made

Barclay Curle & Co. Ltd. (No 564) when made 1919

Boilers made at

Glasgow

By whom made

D. Rowan & Co. Ltd. (No 287) when made 1919

Registered Horse Power

1138

Owners British India Steam Navigation Co.

Port belonging to Glasgow

Nom. Horse Power as per Section 28

1150

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders 6

No. of Cranks 6

Dia. of Cylinders 26 1/2 x 44-73

Length of Stroke 48

Revs. per minute 87

Dia. of Screw shaft

14 1/2

Material of screw shaft

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

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

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

Length of stern bush 5-3

Dia. of Tunnel shaft

as per rule 13.69

as fitted 13 1/2

Dia. of Crank shaft journals

as per rule 14.32

as fitted 14 3/4

Dia. of Crank pin

14 3/4

Size of Crank webs

9 x 28

Dia. of thrust shaft under

collars

15

Dia. of screw

17-3

Pitch of Screw

19-3

No. of Blades

4

State whether moveable

Yes

No. of Feed pumps

4

Diameter of ditto

4 1/2

Stroke

24

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

4

Diameter of ditto

4 1/2

Stroke

24

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

3

Sizes of Pumps

(2) 9 1/2 x 7 x 18

(1) 10 1/2 x 14 x 24

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

In Engine Room

Two 3 1/2

Stokehold

Two 3 1/2

In Holds, &c.

No. 1 Two 3 1/2

No. 2 Two 3 1/2

No. 3 Two 3 1/2

No. 4 Two 3 1/2

No. 5 Two 3 1/2

No. 6 One 3 1/2

Tunnel well one 3 1/2

No. of Bilge Injections

2

sizes

13

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

Yes

3 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

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

Below

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

1 x Suction

How are they protected

Iron casing

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

Dates of examination of completion of fitting of Sea Connections

27.3.19

of Stern Tube

24.4.19

Screw shaft and Propeller

24.4.19

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from upper Platform

BOILERS, &c.—(Letter for record)

Ex Front Tube Plate 17079

Manufacturers of Steel

Steel Co. of Scotland Ltd.

Total Heating Surface of Boilers

17352

Is Forced Draft fitted

Yes

No. and Description of Boilers

3

Double-ended

Working Pressure

200 lb

Tested by hydraulic pressure to

350 lb

Date of test

18.4.19

No. of Certificate

14697

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

146.6 sq ft

No. and Description of Safety Valves to

each boiler

3

Spring loaded

Area of each valve

14.18 sq in

Pressure to which they are adjusted

200 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

1-6

Mean dia. of boilers

16-3

Length

20-6

Material of shell plates

Steel

Thickness

15

Range of tensile strength

28632 ton

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Lap

Long. seams

TRDBS

Diameter of rivet holes in long. seams

1 1/2

Pitch of rivets

10 1/2

Lap of plates or width of butt straps

22 1/2

Per centages of strength of longitudinal joint

rivets 85.3

plate 85.7

Working pressure of shell by rules

207

Size of manhole in shell

16 x 12

Size of compensating ring

McNeill

No. and Description of Furnaces in each boiler

8

Brighton

Material

Steel

Outside diameter

44 1/2

Length of plain part

top

Thickness of plates

crown 19

bottom 3 1/2

Description of longitudinal joint

Weld

No. of strengthening rings

1

Working pressure of furnace by the rules

213

Combustion chamber plates: Material

Steel

Thickness: Sides

11/16

Back

Top 11/16

Bottom 11/16

Pitch of stays to ditto: Sides

9 1/2 x 8 1/2

Back

Top 8 1/2 x 6

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

211

Material of stays

Steel

Diameter at smallest part

2 07/8

Area supported by each stay

77 sq in

Working pressure by rules

241

End plates in steam space:

Material

Steel

Thickness

1 1/2

Pitch of stays

22 x 2 1/2

How are stays secured

Nuts

Working pressure by rules

204

Material of stays

Steel

Material at smallest part

Steel

Thickness

1 1/2

Pitch of stays

22 x 2 1/2

How are stays secured

Nuts

Working pressure by rules

207

Material of Front plates at bottom

Steel

Thickness

1

Material of Lower back plate

Steel

Thickness

1

Greatest pitch of stays

Working pressure of plate by rules

203

Diameter of tubes

2 1/2

Pitch of tubes

3 3/4 x 3 5/8

Material of tube plates

Steel

Thickness: Front

1 1/4

Back

3/4

Mean pitch of stays

17 1/2 x 7 1/4

Pitch across wide water spaces

13 1/2

Working pressures by rules

203

Girders to Chamber tops: Material

Steel

Depth and

Thickness of girder at centre

12 3/8 x 1 (2)

Length as per rule

52 1/4

Distance apart

8 1/2 x 6

Number and pitch of stays in each

Five 8 1/2

Working pressure by rules

201

Superheater or Steam chest; how connected to boiler

None

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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

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

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description	Name			
Made at	By whom made	When made	Where fixed		
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
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
Working pressure of shell by rules	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	
Working pressure of furnace by rules	Thickness of furnace crown plates	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— 2 top end bolts and nuts 2 bottom end bolts
+ nuts 2 main bearing bolts + nuts 1 set of coupling bolts + nuts 1 set of
big Pump Valves Iron bolts and nuts assorted and other articles

The foregoing is a correct description,

Manufacturer.

FOR BARCLAY, CURLE & CO., LTD.

John R. Ewan

DAVID EWAN & CO., LIMITED
Director

Dates of Survey	During progress of work in shops	1917. Jan. 11. 1918. Jan. 20. 28. Mar. 6. 12. 13. 27. Apr. 13. H. 9. 24. 26. May 20. 28.
while building	During erection on board vessel	Dec. 5. 11. 13. 19. 27. 1917. Jan. 10. 23. 29. Feb. 12. 15. Mar. 10. 14. 27. Apr. 1. 3. 14. 16. 24. May 8.
Total No. of visits	69.	
Dates on Boilers	1918. Sept. 11. 20. Oct. 1. 16. Nov. 22. Dec. 19.	
	1919. Jan. 8. Feb. 11. Mar. 13. 14. Apr. 14. 18.	= 13
Dates of Examination of principal parts	Cylinders	5.12.18
	Slides	31.10.18
	Covers	31.10.18
	Pistons	31.10.18
	Rods	5.12.18
Connecting rods	5.12.18	
Crank shaft	3.4.19	
Thrust shaft	10.3.19	
Tunnel shafts	19.12.18	
Screw shafts	27.12.18	
Propellers	24.4.19	
Stern tubes	27.3.19	
Steam pipes tested	11.12.18 31.5.19	
Engine and boiler seatings	27.3.19	
Engines holding down bolts	2.6.19	
Completion of pumping arrangements	2.6.19	
Boilers fixed	2.6.19	
Engines tried under steam	12.6.19 20.6.19	
Main boiler safety valves adjusted	12.6.19	
Thickness of adjusting washers	St. B. P. 3/8" 7/8" 1 1/8" 1 3/8" 1 5/8" 1 7/8" 2" 2 1/8" 2 3/8" 2 5/8" 2 7/8" 3" 3 1/8" 3 3/8" 3 5/8" 3 7/8" 4" 4 1/8" 4 3/8" 4 5/8" 4 7/8" 5" 5 1/8" 5 3/8" 5 5/8" 5 7/8" 6" 6 1/8" 6 3/8" 6 5/8" 6 7/8" 7" 7 1/8" 7 3/8" 7 5/8" 7 7/8" 8" 8 1/8" 8 3/8" 8 5/8" 8 7/8" 9" 9 1/8" 9 3/8" 9 5/8" 9 7/8" 10" 10 1/8" 10 3/8" 10 5/8" 10 7/8" 11" 11 1/8" 11 3/8" 11 5/8" 11 7/8" 12" 12 1/8" 12 3/8" 12 5/8" 12 7/8" 13" 13 1/8" 13 3/8" 13 5/8" 13 7/8" 14" 14 1/8" 14 3/8" 14 5/8" 14 7/8" 15" 15 1/8" 15 3/8" 15 5/8" 15 7/8" 16" 16 1/8" 16 3/8" 16 5/8" 16 7/8" 17" 17 1/8" 17 3/8" 17 5/8" 17 7/8" 18" 18 1/8" 18 3/8" 18 5/8" 18 7/8" 19" 19 1/8" 19 3/8" 19 5/8" 19 7/8" 20" 20 1/8" 20 3/8" 20 5/8" 20 7/8" 21" 21 1/8" 21 3/8" 21 5/8" 21 7/8" 22" 22 1/8" 22 3/8" 22 5/8" 22 7/8" 23" 23 1/8" 23 3/8" 23 5/8" 23 7/8" 24" 24 1/8" 24 3/8" 24 5/8" 24 7/8" 25" 25 1/8" 25 3/8" 25 5/8" 25 7/8" 26" 26 1/8" 26 3/8" 26 5/8" 26 7/8" 27" 27 1/8" 27 3/8" 27 5/8" 27 7/8" 28" 28 1/8" 28 3/8" 28 5/8" 28 7/8" 29" 29 1/8" 29 3/8" 29 5/8" 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