

REPORT ON MACHINERY.

No. 8495.

24 SEP 1924

Date of writing Report

17 Sept

1924

When handed in at Local Office

23 Sept

1924 Port of

Received at London Office

Bundee

No. in Survey held at
Reg. Book.

Bundee

Date, First Survey

9 Jan. 1924

Last Survey

17 Sept

1924

on the

Paddle Ferry Steamer

"WILLIAM HIGH"

(Number of Visits

69)

Tons

Gross

Net

When built

1924

Master

Built at

Bundee

By whom built

Caledon S.B. & L. Co. S/B No 292

Engines made at

Bundee

By whom made

Caledon S.B. & L. Co. S/B No 492

when made

1924

Boilers made at

Bundee

By whom made

Caledon S.B. & L. Co. S/B No 492

when made

1924

Registered Horse Power

Owners

Bundee Harbour Commissioners

Port belonging to

Bundee

Nom. Horse Power as per Section 28

114

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Twin Diagonal Compound Surface Con

No. of Cylinders

2

Each has

No. of Cranks

4.2

Dia. of Cylinders

18" & 34"

Length of Stroke

42"

Revs. per minute

39

Dia. of Screw shaft

as per rule 8.5/8"

Material of

screw shaft

as fitted 8.5/8"

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

Yes

Dia. of Tunnel shaft

as per rule 8.4"

Dia. of Crank shaft journals

as per rule 8.5/8"

Dia. of Crank pin

7"

Size of Crank webs

16 1/2 x 5 1/2"

Dia. of thrust shaft under

collars

as fitted 8.4"

No. of Feed pumps

1 each engine

Diameter of ditto

3 1/2"

Stroke

18"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

1

Diameter of ditto

3 1/2"

Stroke

18"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

Two

Sizes of Pumps

5 1/2 x 3 1/2 x 5"

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

In Engine Room

2 @ 2"

In Holds, &c.

2 @ 2" forward & 2 @ 2" aft

No. of Bilge Injections

2 sizes

3 1/2"

Connected to condenser, or to circulating pump

C.P.

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

None

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

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

Is the Screw Shaft Tunnel watertight

No tunnel

Is it fitted with a watertight door

Yes

worked from

BOILERS, &c.—(Letter for record

17)

Manufacturers of Steel

J. Colville & Sons, Lanarkshire Steel Co., Scottish Iron & Steel Co.

Total Heating Surface of Boilers

1456 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

1 Single ended Multitubular

Working Pressure

120 lbs

Tested by hydraulic pressure to

230 lbs

Date of test

6-5-24

No. of Certificate

1004

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

41 sq ft

No. and Description of Safety Valves to

each boiler

Two Spring loaded

Area of each valve

7.16 sq in

Pressure to which they are adjusted

125 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Mean dia. of boilers

13'-6"

Length

10'-0"

Material of shell plates

S

Thickness

25/32"

Range of tensile strength

28-32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

L.D.R.

long. seams

D. Straps T.R.

Diameter of rivet holes in long. seams

7/8"

Pitch of rivets

6'-4"

Lap of plates or width of butt straps

13'-8"

Per centages of strength of longitudinal joint

rivets 95
plate 86.3

Working pressure of shell by rules

124 lbs

Size of manhole in shell

16 x 12"

Size of compensating ring

35 x 31 x 25/32"

No. and Description of Furnaces in each boiler

3 plain

Material

S

Outside diameter

42 1/2"

Length of plain part

top 78"
bottom 72"

Thickness of plates

crown 5/8"
bottom 7/8"

Description of longitudinal joint

weld

No. of strengthening rings

Yes

Working pressure of furnace by the rules

121

Combustion chamber plates: Material

S

Thickness: Sides

1/2"

Back

1/2"

Top

9/16"

Bottom

Pitch of stays to ditto: Sides

8 x 7 1/2"

Back

8 1/2 x 7 1/2"

Top

9 1/2 x 8 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

123

Material of stays

Iron

Area at smallest part

1.19 sq in

Area supported by each stay

80.75 sq in

Working pressure by rules

124

End plates in steam space:

Material

S

Thickness

1"

Pitch of stays

19 1/2 x 19"

How are stays secured

S.N. & W.

Working pressure by rules

124

Material of stays

S

Area at smallest part

3.67 sq in

Area supported by each stay

370.05 sq in

Working pressure by rules

129

Material of Front plates at bottom

S

Thickness

11/16"

Material of Lower back plate

S

Thickness

5/8"

Greatest pitch of stays

13 1/2 x 8 1/2"

Working pressure of plate by rules

122

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/16 x 4 1/16"

Material of tube plates

S

Thickness: Front

11/16"

Back

11/16"

Mean pitch of stays

11 3/4"

Pitch across wide water spaces

14 1/2 + 11/16"

Working pressures by rules

122

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

78" x 1 1/8"

Length as per rule

28 1/2"

Working pressure by rules

121

Steam dome: description of joint to shell

Yes

% of strength of joint

Yes

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

Lloyd's Register

Foundation

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two Crank pin and Bolts + nuts, 2 Crosshead bolts + nuts. Two main bearing bolts + nuts, 1 set each of Lead & Bilge Pump valves, assorted iron, bolts + nuts.

The foregoing is a correct description,

THE CALEDON SHIPBUILDING & ENGINEERING CO. LD

D. D. Bruce

SECRETARY Manufacturer.

Dates of Survey while building
During progress of work in shops - - 1924 JAN. 9. 14. 18. 22. 28. 29. FEB. 4. 6. 8. 12. 13. 18. 26. MAR. 4. 5. 10. 13. 14. 14. 21. 25. 26. 31. APR. 4. 7. 8. 10. 11. 18. 22. 24. 25. 28. 29. 30. MAY 5. 6. 7. 11. 13. 14. 19. 22. 23. 26. 27. 30. JUNE 2. 3. 9.
During erection on board vessel - - - JUNE 10. 14. 24. JULY 15. 14. 18. 22. 24. AUG. 6. 11. 12. 19. 21. 25. 27. SEPT. 10. 11. 14.
Total No. of visits 69.

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

Yes

Dates of Examination of principal parts—Cylinders 18-4-24 Slides 7-5-24 Covers 18-4-24 Pistons 7-5-24 Rods 5-5-24

Connecting rods 16-4-24 Crank shaft 16-4-24 Thrust shaft — Tunnel shafts — PADDLE Shaft 9-6-24 PADDLES Propeller 7-5-24

OUTER BEARINGS 9-6-24 Steam pipes tested 18-7-24 & 21-8-24 Engine and boiler seatings 2-6-24 Engines holding down bolts 11-8-24

Completion of pumping arrangements 11-9-24 Boilers fixed 11-8-24 Engines tried under steam 11-9-24

Completion of fitting sea connections 17-6-24 OUTER BEARINGS Stern tube 17-6-24 PADDLE SHAFTS & PADDLES Screw shaft and propeller 24-6-24

Main boiler safety valves adjusted 27-8-24 Thickness of adjusting washers P 13/32" S 13/32"

Material of Crank shaft Identification Mark on Do. N^o 492 JES. Material of Thrust shaft Identification Mark on Do.

Material of Tunnel shafts Identification Marks on Do. Material of PADDLE shafts Identification Marks on Do.

Material of Steam Pipes Seamless copper Test pressure 300 lbs

Is an installation fitted for burning oil fuel 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 If so, state name of vessel "Newport" Dundee Repot No 7550

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

The Engines and Boilers of this vessel have been built under Special Survey and in accordance with the Rules & approved Plan.

The materials and workmanship are sound & good.

They have been fitted on board in a satisfactory manner, tried under working conditions and found efficient and are eligible in my opinion to be classed with record of L.M.C. 9-24.

It is submitted that this vessel is eligible for THE RECORD. + LMC 9. 24.

C.D. 4 Cy 18" & 34" - 42" 114 NHP.

1 SB. 3 pf. GS 41. HS 1456. (T)

12075.

The amount of Entry Fee ... £ 3 : 0 :
Special ... £ 28 : 10 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 23/9/1924
When received, 29/9/24

Committee's Minute

FRI. 26 SEP 1924

Assigned

+ L.M.C. 9.24

CERTIFICATE WRITTEN

Engineer Surveyor to Lloyd's Register of Shipping.



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