

No. 328

BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 331. No. in Register Book 841.

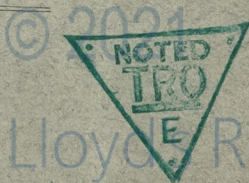
s.s. "WAHCONDAN"

Makers of Boilers *North Eastern Marine Eng Co Ltd*

Makers of Engines *John S. Kincaid & Co.*

Works No. 317
MAIN BOILERS, No 1467

MACHINERY.



Lloyd's Register
Foundation


004426-004431-0081

BRITISH CORPORATION FOR THE SURVEY AND
REGISTRY OF SHIPPING.

Surveyor's Report on the New Machinery of the

No. in Register Book 841.
Report No. 331. Received at Glasgow Office 24/4/03.
Surveyor's District *Lyne, & Glasgow* Works No. *317*
Survey held at *Greenock* *Main Boiler No. 1467*
First Visit *3.9.1902* Last Visit *10.4.1903* Total Visits *Engo. 24*
Name of Steamer *"WAHCONDAN"* " *"m. boiler 18"*
Gross Tons *1554.36* R.H.P. *148*
When Built *March 1903* Where Built *Port Glasgow*
Owners *New Ontario Steamship Co. Ltd.* Port of Registry
Engines made by *John G. Kincaid & Co.* in *3/1903*
Where made *Greenock*
Boilers made by *North Eastern Marine Eng Co. Ltd.* in *3/1903*
Where made *Wallsend on Tyne*
Donkey Boiler made by ☒ in ☒
Where made ☒

ENGINES.

Description *Triple expansion, Surper condensing*
No. of Cyls. *3* Diameter *18", 28", 47"* Stroke *33"*
Cub. feet in L. P. Cylinder *33.13* Revs. per minute *80*
Diameter of Crank Shaft *9 1/2"* Tunnel Shaft ☒ Propeller Shaft *10 1/8"*
and Length of Crank Pin *9 1/2" diam. 10" long.*
Shaft Journals *6 @ 9 1/2" diam. 10" long.*
Size of Crank Webs  *6 1/2"* Is Crank Shaft built? *yes*
Diameter of Propeller *12-4"* Pitch *12-9"* No. of Blades *4*
Fitted or Solid *Fitted* Material of Blades and Boss *Blades Cast Steel
Boss Iron*

Total Surface

53 sq. ft.

No. of Feed Pumps or Engines

2

Diameter

2 1/2"

Stroke

18"

Can one be overhauled while the other is at work?

Yes

Where do they pump from and to?

From Hotwell to Boilers

No. of Donkey Engines

see page 11

Diameter of Pump and Stroke

✓

Where do they pump from and to?

see page 11

No. of Bilge Pumps or Engines

2

Diameter

3"

Stroke

18"

Can one be overhauled while the other is at work?

Yes

Where do they pump from and to?

From Bilges, overboard.

No. and kind of Sluices on Engine Room Bulkheads

None

Are they always accessible?

✓

Are all the Bilge Suction Pipes fitted with Roses, and are these always accessible?

yes

No. and Size of Bilge Injections connected to Condenser

None

Has Circulating Pump a Bilge Suction with Non-return Valve?

Yes 4" diar.

Are Circulating and other Pumps worked by Main Engines?

Yes

Are all Sea Connections fitted direct on to Vessel's plating?

Yes

Are they Valves or Cocks?

Both

Placed so as to be easily seen and accessible?

Yes

Are the Discharge Chests fitted above the Deep Load Line?

Yes

Are they fitted direct on Vessel's side with Non-return Valves, easily accessible?

Yes

Are all Valves, Cocks, or Pipes, in connection with the Machinery, accessible?

Yes

Are the Valves, Cocks, and Pipes so arranged as to absolutely prevent any unintentional connection between the Sea and the Bilges?

Yes

Are all Blow-off Cocks fitted with Spigots passing through the Vessel's plating, and having Covering Plates or

Flanges on the outside?

Yes

Are efficient Rose Plates or Grids fitted to the Sea Suctions?

Yes

What Pipes are carried through Bunkers or Holds, and how are they protected?

Ballast Tank

Air Pipes only, in strong wood casing

Is the Shaft Tunnel fitted with an efficient Watertight Door?

No tunnel

From what Deck is it worked?

✓

Are there any Doors in Stokehold Bulkheads?

No

From what Deck are they worked?

✓

Are these Doors in good working condition?

✓

MAIN BOILERS.

No 1487

Iron or Steel

Steel

No. of Boilers

2

No. of Furnaces in each

2

Description of Boilers, single or double ended, or any Superheating Arrangement

Single ended

Diameter of Boilers

12' 6"

Length

10' 6"

Working Pressure

180 lbs

Hydraulic Test

360 lbs

Can Boilers be worked separately?

Yes

Can Superheater be shut off while Boiler is working?

No Superheater

Square feet of Grate Surface in each Boiler

45

Heating

1287

No. and kind of Safety Valves on each Boiler

2 Spring loaded, Lockburton's

Diameter and Area of each Safety Valve

2 1/2" diar. 4.9 sq area

No., Diameter, and Area of Safety Valves on Superheater

✓

✓

Are the Valves fitted with Easing Gear?

Yes

Thickness of Shell Plates

1 3/32"

Diameter of Rivet Holes

1 5/32"

Holes Punched or Drilled

Drilled

Description of Riveting in Shell

Machine, front and hand

Circumferential Seams

double laps

Long. Seams

double straps

Pitch of Rivets

Circle 3 1/2" Long 7 1/4 x 3 1/4"

Width of Overlap

built 5 1/8" Long 16 15/16"

Percentage of Strength in Long. Seams

85-5%

Working Pressure by Rules

202 lbs

Size of Manhole in

16" x 12"

Size of Compensating Rings

Description of Furnaces

Deightons Patent corrugated
 Outside Diameter of Furnace $49\frac{1}{4}"$ Inside ditto $45\frac{1}{2}"$ Length between Tube Plates $7'2"$

Thickness of Plates $\frac{5}{8}"$

If Adamson Rings, state greatest distance between the Rings ☒

Working Pressure by Rules

198 lbs.

Combustion Chamber distance, front to back $28"$

Thickness of Plating, Back $\frac{1}{16}"$ Sides $\frac{1}{16}"$ Bottom $\frac{1}{16}"$

Pitch of Stays, Sides $9\frac{3}{8}" \times 9"$ Back $9\frac{3}{8}" \times 9"$ Top $9\frac{3}{8}" \times 9"$

Top Girders, No. over each Chamber 5 Depth $8\frac{1}{4}"$ Thickness $\frac{3}{4}"$ double

Diameter of Screwed Stays $2"$, $1\frac{7}{8}"$ & $1\frac{5}{8}"$ If fitted with Nuts outside and inside? *nuts in & out*

Working Pressure by Rules

195 lbs.

Thickness of End Plates in Steam Space $1\frac{3}{8}"$

Pitch of Stays on End Plates $19\frac{1}{2}" \times 18\frac{1}{2}"$

Effective Diameter of Stays (smallest part) 3.037

How are Stays secured? *nuts and washers inside and out.*

Working Pressure by Rules

215 lbs.

Thickness of Front and Plates at Bottom

$\frac{7}{8}"$

Back

$\frac{7}{8}"$

External Diameter and thickness of Tubes (Plain and Stay) *Plain $3\frac{1}{4}"$, No 8 B.W.G. Stay $\frac{3}{8}"$ & $\frac{3}{16}"$*

Pitch of Tubes $4\frac{3}{8}"$ centres

No. of Plain Tubes in each Stack 55

Stay 26

How are they secured to Tube Plates? *Plain tubes expanded, Stay tubes screwed.*

Thickness of Tube Plates, Front

$\frac{7}{8}"$

Back $\frac{3}{4}"$

Spaces between Stacks of Tubes

$14\frac{1}{2}"$ centres

Least distance between Side Stacks and Boiler Shell

$10\frac{3}{4}"$

Distance between Top of Furnaces and Bottom Row of Tubes, Side Furnaces

$9\frac{1}{4}"$

Centre Furnace $9\frac{1}{4}"$

Dimensions of Steam Chest or Superheater ☒

Thickness of Plating of ditto ☒

Riveting ☒

Is the Staying Longitudinal or otherwise? ☒

How connected to Boiler? ☒

Working Pressure by Rules ☒

DONKEY BOILER.

Iron or Steel.

Description of Boiler

Diameter

Length

Working Pressure

Hydraulic Test, and when applied

Square Feet of Grate Surface

Heating

Thickness of Shell Plating

Description of Riveting

Diameter of Rivets

Pitch

Holes Punched or Drilled

Lap of Plating

Percentage of strength of Joint

Thickness of Crown Plates

Side

Description of Staying

Height of Furnace Crown above Fire Grate

Diameter of Uptake Tube

Material

Thickness

Number of Water Tubes

Material

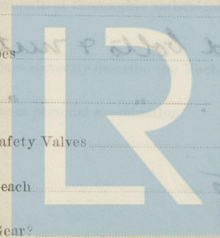
Diameter

Thickness

Number and kind of Safety Valves

Diameter and Area of each

If fitted with Easing Gear?



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If the Donkey Boiler is Tubular, the additional particulars as required for Main Boilers must be given.

GENERAL CONSTRUCTION.

Have all the requirements under Section 33 of the Rules, paragraphs 1 to 13, been complied with in every respect?

Yes.

If not, give full details of the points of difference, and state when the same were sanctioned by the Chief Surveyor

State articles of Spare Gear supplied

- 2 Connecting Rod top end bolts & nuts
- 2 " " bot. " " "
- 2 Propeller blades
- 2 Main bearing bolts
- 1 Set coupling "

Full set of firebars
6 light Cover & 6 Valve Lining Cover studs.
50 bolts & nuts assorted.
Bar & plate iron of various sizes

Give for each Main Boiler and for Donkey Boiler respectively the dates of Hydraulic Testing and Valve Setting and Trial of Machinery under Steam. If the Trial was conducted at the Wharf and not at Sea, the Surveyor should state how long he was in attendance.

Main Boilers tested	18-2-03
Main Steam Pipes "	24-3-1903
Feed Water Filter "	6-3-1903
Safety Valves set	2-4-1903
Steam trial at Wharf	2-4-1903
Trial trip	7-4-1903

Are the Steam Pumping Arrangements in accordance with the approved Plan, and Section 34 of the Rules? If not, state in what respect they differ, and when such differences were sanctioned by the Chief Surveyor

The Bilge suction pipes to Holds are led inside the Ballast Tanks

Are the Materials used in the construction of Boilers and Engines sound and trustworthy?

Yes

Is the workmanship throughout thoroughly satisfactory?

Yes

The above particulars correctly describe the Machinery of the S.S. "Wahcondah" as ascertained by me from personal examination.

Thos. L. Scorge
James Barr
Engineer Surveyors to the British Corporation for the Survey and Registry of Shipping.

Fees—

MAIN BOILERS.

H.S. 2574 Sq. ft.

£ 13 0 0

G.S. 90

DONKEY BOILERS.

H.S. Sq. ft.

— — —

G.S. — — —

ENGINES.

L. P. C. 33.13 Cub. ft.

9 0 0

Testing, &c. — — —

Expenses ...

B 1 1 0

M 1 1 0

Total ... £ 24 2 0

It is submitted that this Report be approved,

H. J. Comities-Butt
 Chief Surveyor.

1/5/1903.

Approved by the Committee,

for the class of M.B.S.*
 on the 29th April 1903

Fees applied for 9/4/1903

Fees paid 9/4/1903.

John Manning
 Secretary.



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Shafting etc.

Crank & Thrust Shafts of Ingot Steel, forged & finished by Messrs. Burmeister & Wain, Copenhagen.

Propeller Shaft of Scrap Iron forged & finished by. Kye Forge Co., Kirkcaldy.

Piston & Connecting Rods of Ingot Steel, forged & finished by Burmeister & Wain, Copenhagen.

Service Donkey

Lamont's Duplex $7 \times 4\frac{1}{2} \times 8$ "
Pumps from Sea, Hotwell, Ballast Tanks,
Main Bilge & Boilers.
To Boilers, Ash ejector, Deck & overboard. ✓

Ballast Donkey

Kincaid's $9 \times 10 \times 10$ "
Pumps from Sea, Ballast Tanks, Main Bilge
& Engine Room Bilges.
To Condensers, Tanks & overboard.

Boiler Donkey

Lamont's Duplex $5 \times 3\frac{1}{2} \times 6$ "
Pumps from Sea & Exhaust Tank
To Boilers

Feed Water Filter

Kincaid & Crockatt
Placed between Feed Pumps & Boilers



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Lower Monkey
 Camshaft Pulley 7 x 4 1/2 x 8"
 Pump from Sea, Vertical, Ballast Tanks
 Main Ship & Boilers
 To Boiler, Deck, Jacket, Deck & overboard.
 Propeller & Vertical, Copenhagen

Ballast Monkey
 Propeller 12 x 10 x 10"
 Pump from Sea, Ballast Tanks, Main Ship
 & Engine Room, Boilers
 To Condenser Tanks & overboard.

Piston & Connecting Rods of
Lower Monkey
 by Camshaft Pulley 7 x 4 1/2 x 8"
 Pump from Sea & Exhaust Tank, Main Ship
 To Boilers

Feed Water Filter
 Kincaid & Crockett
 Placed between Feed Pumps & Boilers



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