

REPORT ON MACHINERY.

No. 9925

Received at London Office WED OCT 31 1917

Date of writing Report

19

When handed in at Local Office

30/10/17 Port of Middlesbrough

in Survey held at

Stockton-on-Tees

Date, First Survey

26th Oct/16

Last Survey

17th Oct 1917

g. Book.

on the

Steel screw steamer "Cardigan"

(S.S. No 653)

Tons

Gross 5879

Net 4237

Master

H Williamson

Built at

Stockton

By whom built

Messrs Richardson Duck & Co

When built

1917

Engines made at

Stockton

By whom made

Messrs Blair & Co Lim. (No 1840)

when made

1917

Milers made at

Stockton

By whom made

Messrs Blair & Co Lim.

when made

1917

Registered Horse Power

Owners

Cardigan S S Coffin

Port belonging to

Cardiff

Horse Power as per Section 28

425

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

GINES, &c.—Description of Engines

Tri-compound

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

26-43-71

Length of Stroke

48

Revs. per minute

63

Dia. of Screw shaft

as per rule 14.7

Material of

Iron

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

the propeller boss

yes

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

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

tight fit

If two

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

Length of stern bush

5'-4"

Dia. of Tunnel shaft

as per rule 13.05

as fitted 13.34

Dia. of Crank shaft journals

as per rule 13.7

as fitted 14.5

Dia. of Crank pin

14 3/4

Size of Crank webs

28 1/2 x 9 1/2

Dia. of thrust shaft under

bars

14 3/4

Dia. of screw

18'-0"

Pitch of Screw

17'-6"

No. of Blades

4

State whether moveable

no

Total surface

100' sq

Feed pumps

2

Diameter of ditto

4"

Stroke

34"

Can one be overhauled while the other is at work

yes

Bilge pumps

2

Diameter of ditto

5"

Stroke

34"

Can one be overhauled while the other is at work

yes

Donkey Engines

2

Sizes of Pumps

Ballast

Fuel

1 1/2 x 1 1/2

4 x 8"

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

Engine Room

3 @ 3 1/2"

In Holds, &c. 2 @ 3 1/2" each hold except aftermost

Tunnel will one @ 2 1/2"

Bilge Injections

1

size

7"

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes-4"

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

no

Connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

both

Are the Discharge Pipes above or below the deep water line

above

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

How are they protected

wood ceiling

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

Screw Shaft Tunnel watertight

see hull Report

Is it fitted with a watertight door

yes

Worked from

top platform

RS, &c.—(Letter for record (R))

Manufacturers of Steel

Messrs John Spencer & Sons Lim.

Rating Surface of Boilers

7171

Is Forced Draft fitted

no

No. and Description of Boilers

3 Single ended

Pressure

180

Tested by hydraulic pressure to

360

Date of test

17.8.17

No. of Certificate

5794

boiler be worked separately

yes

Area of fire grate in each boiler

64.1 sq

No. and Description of Safety Valves to

2 direct spring

Area of each valve

8.29 sq

Pressure to which they are adjusted

185 lbs

Distance between boilers

or uptakes and bunkers or woodwork

3'-0"

Mean dia. of boilers

15'-6"

Length

11'-6"

Material of shell plates

steel

Range of tensile strength

29 1/2 - 33

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

2-R-lap

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

9 1/2"

Lap of plates or width of butt straps

19 1/2 x 1 1/2"

Rivets per pitch

rivets

92.5

Working pressure of shell by rules

186

Size of manhole in shell

16" x 12"

Strength of longitudinal joint

plate

85.7

No. and Description of Furnaces in each boiler

3 Brighton

Material

steel

Outside diameter

46 3/8"

Compensating ring

7 1/2 x 1 1/2"

Thickness of plates

crown 9 1/4"

Description of longitudinal joint

weld

No. of strengthening rings

yes

Main part

top

bottom

Pressure of furnace by the rules

189

Combustion chamber plates: Material

steel

Thickness: Sides

1 1/2"

Back 1 1/2"

Top 1 1/2"

Bottom 2 1/2"

Pressure of furnace by the rules

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1 1/2"

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Bottom 2 1/2"

Pressure of furnace by the rules

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes. Mdb Report*

SPARE GEAR. State the articles supplied:— *Two each of con. rod top end, bottom end and main beam bolts and nuts: one set of coupling bolts and nuts: one set of feed and bilge pump valves one set each HP & MP pistons ram bottom rings: assorted bolts & nuts: iron of various One tail end shaft*

The foregoing is a correct description,

FOR BLAIR & CO., LIMITED

Geo W. Hershby

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1916. Oct 26. 1917. Jan 15. 22. 25. Feb 12. 14. 21. 26. Mar 5. 16. 22. 26. Apr 2. 19. 25. 30. May 2. 13. 15. 19. 26. 28. July 2. 4. 5. 6. 9. 12. 13. 16. 19. 23. 25. 27. 30. 31. Aug 1. 3. 6. 8. 10. 13. 15. 17. 28. 31. Sep 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. 31. Oct 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. 31. Nov 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. 31. Dec 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. 31. Total No. of visits *62.*

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

" " " donkey " " " *yes*

Dates of Examination of principal parts—Cylinders *6. 8. 17* Slides *16. 7. 17* Covers *6. 8. 17* Pistons *16. 7. 17* Rods *17. 14. 2. 17 to*

Connecting rods *17. 8. 17* Crank shaft *8. 8. 17* Thrust shaft *4. 7. 17* Tunnel shafts *2. 5. 17* Screw shaft *5. 9. 17* Propeller *5. 10. 17*

Stern tube *30. 7. 17* Steam pipes tested *1. 5. 17* Engine and boiler seatings *15. 8. 17* Engines holding down bolts *26. 9. 17*

Completion of pumping arrangements *9. 10. 17* Boilers fixed *9. 10. 17* Engines tried under steam *9. 10. 17*

Completion of fitting sea connections *17. 10. 17* Stern tube *17. 10. 17* Screw shaft and propeller *11. 9. 17*

Main boiler safety valves adjusted *9. 10. 17* Thickness of adjusting washers *P.B. 15/32" 6. B. 15/32" P.B. 15/32" P.B. 15/32"*

Material of Crank shaft *Eng. Steel* Identification Mark on Do. *7105* Material of Thrust shaft *Eng. Steel* Identification Mark on Do. *1688-N*

Material of Tunnel shafts *Eng. Steel* Identification Marks on Do. *1688-N* Material of Screw shafts *W. Iron* Identification Marks on Do. *1688-N*

Material of Steam Pipes *Lap welded steel* Test pressure *540 lb.*

Is an installation fitted for burning oil fuel *no* Is the flash point of the oil to be used over 150° F. *yes*

Have the requirements of Section 49 of the Rules been complied with *yes*

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. The were tested by hydraulic pressure and the engines and boilers examined under steam all found satisfactory*

The machinery is now in a good and safe working condition and renders vessel eligible in my opinion to have the notation of LMC-10.17 in the Register Book

MIDDLESBRO'

Certificate (if required) to be sent to

The amount of Entry Fee ... £ *3 - 0 - 0* When applied for, *28/10/17*
Special ... £ *41 - 5 - 0*
Donkey Boiler Fee ... £ *✓* : : When received, *28/10/17*
Travelling Expenses (if any) £ : : *28/10/17*

Committee's Minute

Assigned

FRI. 9 - NOV. 1917

+ LMC 10.17



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MAINTENANCE CERTIFICATE