

Rpt. 4.

REPORT ON MACHINERY.

No. 9589

Date of writing Report

When handed in at Local Office

Received at London Office

18 JAN 1917

No. in Survey held at

Stockton

Date, First Survey

17/11/1917 Port of Middlesbrough

Reg. Book.

on the

Steel Screw Steamer ASHLEAF

Date, Last Survey

6th Jan 1917

Master W. Phillips

Built at

Stockton

By whom built

Messrs Roper & Sons

Engines made at

Stockton

By whom made

Messrs Blair & Co Ltd (1834)

Tons

Gross 5768

Net 3436

When built

1917

Boilers made at

Stockton

By whom made

Messrs Blair & Co Ltd

when made

1917

Registered Horse Power

Owners

Lane & Macandrew Ltd

Port belonging to

London

Nom. Horse Power as per Section 28

432

Is Refrigerating Machinery fitted for cargo purposes

yes

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Tri-compound

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

25-42-68

Length of Stroke

48

Revs. per minute

65

Dia. of Screw shaft

as per rule 14.33

Material of

Ing Steel

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

yes

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

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

tight fit

If two

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

yes

Length of stern bush

5-3"

Dia. of Tunnel shaft

as per rule 12.74

Dia. of Crank shaft journals

as per rule 13.38

Dia. of Crank pin

14 1/2"

Size of Crank web

27 1/2" x 9 1/2"

Dia. of thrust shaft under

Collars

14 1/2"

Dia. of screw

17-6"

Pitch of Screw

17-6"

No. of Blades

4

State whether moveable

no

No. of Feed pumps

2

Diameter of ditto

3 1/4"

Stroke

34"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

4 3/4"

Stroke

34"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

SIZES OF PUMPS

Ballant 9x11x10 2 1/2" fls

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

In Holds, &c. Oil cargo special pumping arrangements

In Engine Room

3 @ 3 1/2"

Winch feed 7x9x24 single

Lemon 8x6x8 2 1/2" fls

In Holds, &c. Oil cargo special pumping arrangements

For pump 8x9x8 2 1/2" fls

For hold 2 @ 2 1/2"

For cofferdam 2 @ 3"

No. of Bilge Injections

1

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes-4"

Are all the bilge suction pipes fitted with roses

yes

Are the roses in Engine room 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 fired 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

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

none

Is it fitted with a watertight door

yes

worked from

Engines aft

OILERS, &c.—(Letter for record (S))

Manufacturers of Steel

Messrs J. Spencer & Sons Ltd

2 main + one aux = 6608 + 1208

Total Heating Surface of Boilers

7808

Is Forced Draft fitted

no

No. and Description of Boilers

2 M + 1 aux single ended

M. Boiler

Date of test

10.3.16

No. of Certificate

5622

Working Pressure

180

Tested by hydraulic pressure to

360

Can each boiler be worked separately

yes

Area of fire grate in each boiler

oil fuel

No. and Description of Safety Valves to

each boiler

2 direct spring

Area of each valve

9.62 sq ft

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

4'-6"

Thickens

1 1/2"

Range of tensile strength

29 1/2 - 33

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

2 R. lap

Long. seams

2 B-3 Riv

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

9 1/2"

Lap of plates or width of butt straps

21 x 1 1/2"

Per centages of strength of longitudinal joint

rivets 99.5

plate 84.25

Working pressure of shell by rules

185

Size of manhole in shell

16" x 12"

No. and Description of Furnaces in each boiler

4 Morrison

Material

steel

Outside diameter

42 1/2"

Length of plain part

top 17

Thickness of plates

crown 17

Description of longitudinal joint

Welded

No. of strengthening rings

Working pressure of furnace by the rules

193

Pitch of stays to ditto: Sides

9 3/4 x 9

Back

8 3/4 x 9 1/2

Top

10 x 8 1/2

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

185

Material of stays

steel

Area at smallest part

1.99

Area supported by each stay

87.75

Working pressure by rules

205

End plates in steam space:

Material

steel

Thickness

1 1/2"

Pitch of stays

21 x 23

How are stays secured

nuts & washers

Working pressure by rules

200

Area at smallest part

9.82

Area supported by each stay

55.2

Working pressure by rules

185

Material of Front plates at bottom

steel

Thickens

1 1/2"

Material of Lower back plate

steel

Thickness

1 1/2"

Greatest pitch of stays

16 1/2 x 9 1/2

Working pressure of plate by rules

201

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/8 x 4 3/4"

Material of tube plates

steel

Thickness: Front

1 1/2"

Back

1 1/2"

Mean pitch of stays

11 1/2"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

191

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8 1/2 x 2"

Length as per rule

33

Distance apart

10"

Number and pitch of stays in each

3 @ 8 1/4"

Working pressure by rules

189

Steam dome: description of joint to shell

none

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

none

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

Pressure to which each is adjusted

Is Easing Gear fitted

Lloyd's Register Foundation

Diameter of Safety Valve

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

Pressure to which each is adjusted

Is Easing Gear fitted

Lloyd's Register Foundation

W970-0105

If so, is a report now forwarded? *yes*

The foregoing is a correct description,
FOR BLAIR & Co., LIMITED.

Geo Nettleship

Manufacturer.

SECRETARY	
Dates of Survey while building	During progress of work in shops -- 10. 12. 14. 19. 26. 28. 31. Feb. 2. 4. 7. 10. 21. 23. 25. Mar. 10. 11. 13. 15. 16. 17. 20. 21. 23. 27. 29. 31. Apr. 3. 5. 7. 10. 12. 16. 18. 20. 22. 24. 26. 28. 30. May 1. 2. 4. 8. 10. 11. 12. 15. 18. 20. 24. 26. 30. 31. June 1. 2. 5. 6. 7. 8. 9. 12. 13. 14. 15. 16. 19. 20. 22. 23. 27. July 4. 7. 13. 14. 20. 21. 24. 25. 28. 29. 30. Sep. 1. 12. 13. 14. 22. 27. 28. 29. Oct. 2. 5. 10. 16. 18. 25. Nov. 7. 9. 21. 23. 28. Dec. 1. 2. 3. 8. 13. 14. 16. 17. 20. 22. 28. 30. 31. 1916. Jan. 4. 5. 6. 1917. Jan. 3. 5. 6.
	During erection on board vessel -- 20. 25. Aug. 3. 7. 9. 10. 15. 18. 24. 28. 29. 30. Sep. 1. 12. 13. 14. 22. 27. 28. 29. Oct. 2. 5. 10. 16. 18. 25. Nov. 7. 9. 21. 23. 28. Dec. 1. 2. 3. 8. 13. 14. 16. 17. 20. 22. 28. 30. 31. 1916. Jan. 4. 5. 6. 1917. Jan. 3. 5. 6.
	Total No. of visits 138.

Is the approved plan of main boiler forwarded herewith *yes*
 " " " *aux* " " " *doney* " " " *yes*

Dates of Examination of principal parts—Cylinders 13.3.16 Slides 25.2.16 Covers 16.3.16 Pistons 21.3.16 Rods 16.3.16
Connecting rods 16.3.16 Crank shaft 13.3.16 Thrust shaft 23.2.16 Tunnel shafts ✓ Screw shaft 29.8.16 - spare 14.9.16 - w/Propeller 14.9.16
Stern tube 9.8.16 Steam pipes tested 18.7.16 ^{mtg 14.2.16 Dec 1916} Engine and boiler seatings 15.8.16 Engines holding down bolts 16.10.16
Completion of pumping arrangements 5.1.17 Boilers fixed 22.12.16 Engines tried under steam 6.1.17
Completion of fitting sea connections 15.8.16 Stern tube 15.8.16 Screw shaft and propeller 10.10.16
Main boiler safety valves adjusted 22.12.16 Thickness of adjusting washers P-Blk S- $\frac{5}{16}$ S-Blk S- $\frac{3}{32}$ R- $\frac{3}{8}$ F- $\frac{1}{2}$
Material of Crank shaft *dy steel* Identification Mark on Do. 7025 Material of Thrust shaft *dy steel* Identification Mark on Do. 1902.
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *dy steel* Identification Marks on Do. 7025
Material of Steam Pipes *Wrought iron* Test pressure 540 lbs
Is an installation fitted with a ...

Is an installation fitted for burning oil fuel yes 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 and in accordance with the Rules and the Specifications approved by the Admiralty. The materials and workmanship are sound and good. The boilers, main and auxiliary engines and pumping installations were tested and all found satisfactory. The oil fuel system (Walsend) was tested by hydraulic pressure and under full working conditions and found satisfactory. The machinery is now in a good and safe working condition and eligible in my opinion to have the notations of \clubsuit LMC-1.17 & "Fitted for oil fuel 1.17 F.P. above 150°F in the Register Book.

* Only six male screw connections and caps fitted to oil delivery pipes, instead of twelve (12) as required by the specification. The Builders state that this was agreed to by the Admiralty.

The amount of Entry Fee	...	£	3	:	0	:	0	When applied for,
Special	...	£	41	:	12	:	0	12/1/1917
Donkey Boiler Fee	...	£	✓	:		:		When received,
Travelling Expenses (if any)	£	✓	:			:		15/1/1917

THE RECORD. + LMC 1.17.
Filtered for oil fuel 1.17. F.P. above 150°F

W^m Morrison JWZ
23/1/17
Engineer. Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. JAN. 23. 1917

Assigned

+ L.M. 6 1.17
Filled for oil fuel 1.17
T.P. above 150° F.

FRI. - 4 MAY 1971
MACHINERY CERTIFICATE
WRITTEN.

Committee's Assigned