

REPORT ON MACHINERY

No. 8982

Received at London Office

JUN. 29. 1915

Date of writing Report

10

When made at Light Office

22/6/15

Port of

Huddersburgh

No. in Survey held at

Stockton-on-Tees

Date, First Survey

Sept. 2nd

Last Survey

June 18. 1915

Reg. Book.

on the

Steel screw steamer *Bilswood*

(S.S. No 501)

Tons

Gross

Net

Master

Built at

Stockton

By whom built Messrs Refner & Sons

When built 1915

Engines made at

Stockton

By whom made

Messrs Blair & Co Ltd (N^o 1816)

when made 1915

Boilers made at

Stockton

By whom made

Messrs Blair & Co Ltd

when made 1915

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

301

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines

Tri-compound

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

24-40-65

Length of Stroke

42

Revs. per minute

62

Dia. of Screw shaft

as per rule 13.58

Material of

Iron

as fitted 14.74

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

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'-1"

Dia. of Tunnel shaft

as per rule 11.84

Dia. of Crank shaft journals

as per rule 12.43

Dia. of Crank pin

13 1/2

Size of Crank webs

24" x 8 1/2"

Dia. of thrust shaft under

collars

13 1/2

Dia. of screw

17'-0"

Pitch of Screw

16'-0"

No. of Blades

4

State whether moveable

no

Total surface

82 sq

No. of Feed pumps

2

Diameter of ditto

3"

Stroke

30"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

4 1/2"

Stroke

30"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2

Sizes of Pumps

9" x 10" 4 x 8"

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

In Engine Room 3 @ 3" and one @ 3 1/2" in boiler space

In Engine Room

3 @ 3" and one @ 3 1/2" in boiler space

In Holds, &c.

2 @ 3" in each hold; Tunnel with

No. of Bilge Injections

1 sizes 7"

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 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

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

suctions to forward holds

How are they protected

wood ceiling

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

23. 3. 15

of Stern Tube

23. 3. 15

Screw shaft and Propeller

5. 5. 15

Is the Screw Shaft Tunnel watertight

see hull rpt

Is it fitted with a watertight door

yes

worked from

top platform

BOILERS, &c.—(Letter for record (S))

Manufacturers of Steel

Messrs John Spencer & Sons

Total Heating Surface of Boilers

4690

Is Forced Draft fitted

no

No. and Description of Boilers

2 single ended

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

26. 3. 15

No. of Certificate

5492

Can each boiler be worked separately

yes

Area of fire grate in each boiler

61.3 sq

No. and Description of Safety Valves to

each boiler

2 direct spring

Area of each valve

7.07

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-0"

Mean dia. of boilers

15'-9"

Length

10'-6"

Material of shell plates

steel

Thickness

1 1/2"

Range of tensile strength

29 3/4 - 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 1/2"

Pitch of rivets

8 3/8"

Lap of plates or width of butt straps

19 3/8 x 1 1/2"

Per centages of strength of longitudinal joint

rivets 93.0

Working pressure of shell by rules

187

Size of manhole in shell

16" x 12"

Size of compensating ring

7 3/8 x 1 3/2"

No. and Description of Furnaces in each boiler

3 Morrison

Material

steel

Outside diameter

46 3/8"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

Description of longitudinal joint

Weld

No. of strengthening rings

yes

Working pressure of furnace by the rules

188

Combustion chamber plates: Material

steel

Thickness: Sides

1 1/2"

Back

1 1/2"

Top

1 1/2"

Bottom

Pitch of stays to ditto: Sides

8 3/8" x 10"

Back

9 3/4" x 8 3/4"

Top

10 1/4" x 8 3/4"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

187

Material of stays

steel

Diameter at smallest part

1.99

Area supported by each stay

86.2

Working pressure by rules

208

End plates in steam space

yes

Material

steel

Thickness

1 1/2"

Pitch of stays

21 x 1 1/2"

How are stays secured

nuts

Working pressure by rules

185

Material of stays

steel

Diameter at smallest part

7.87

Area supported by each stay

441

Working pressure by rules

186

Material of Front plates at bottom

steel

Thickness

1 1/2"

Material of Lower back plate

steel

Thickness

1 1/2"

Greatest pitch of stays

14 1/2" x 8 3/4"

Working pressure of plate by rules

366

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/4" 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

192

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

7 3/8" x 1 1/2"

Length as per rule

26 1/2"

Distance apart

10 1/4"

Working pressure by rules

188

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

separately

yes

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivets

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

IS A DONKEY BOILER FITTED? *yes*If so, is a report now forwarded? *yes, Indt Rpt N° 8859*

SPARE GEAR. State the articles supplied:— *Two each of con. rod top end & bottom end bolts & nuts*
2 main bearing bolts and nuts; one set (7) coupling bolts and nuts; one set of
fuel and bilge pump valves; assorted bolts and nuts; iron of various sizes; one set
each of H.P. & M.P. piston ram bottom rings; one cast iron propeller, one tail end shaft
and minor gear

The foregoing is a correct description,

For BLAIR & Co., LIMITED.

Geo Nettleship

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } *1914 Dec. 2. 7. 9. 14. 15. 14. 22. 1915 Jan 8. 11. 18. 19. 21. 25. 27. 29. Feb 2. 5. 6. 10. 11. 12. 15. 16. 18. 23. 25. Mar 1. 4. 5. 8. 10. 12.*
 { During erection on board vessel - - - } *15. 18. 19. 22. 23. 25. Apr 23. May 5. 10. 11. 14. 18. 24. 31. Jun 7. 16. 18.*
 Total No. of visits *49.*

Is the approved plan of main boiler forwarded herewith *yes*" " " donkey " " " *yes*Dates of Examination of principal parts—Cylinders *15. 12. 14* Slides *21. 1. 15* Covers *21. 1. 15* Pistons *21. 1. 15* Rods *21. 1. 15*Connecting rods *25. 1. 15* Crank shaft *19. 1. 15* Thrust shaft *18. 1. 15* Tunnel shafts *18. 19. 21. 15* Screw shaft *18. 3. 15* Propeller *19. 3. 15*Stern tube *23. 3. 15* Steam pipes tested *10. 5. 15* Engine and boiler seatings *23. 3. 15* Engines holding down bolts *11. 5. 15*Completion of pumping arrangements *27. 5. 15* Boilers fixed *27. 5. 15* Engines tried under steam *27. 5. 15*Main boiler safety valves adjusted *27. 5. 15* Thickness of adjusting washers *Port Blr SV - 3/8; Star Blr SV - 3/8*Material of Crank shaft *Ing Steel* Identification Mark on Do. *6939* Material of Thrust shaft *Ing Steel* Identification Mark on Do. *854.N*Material of Tunnel shafts *Ing Steel* Identification Marks on Do. *854.N* Material of Screw shafts *iron* Identification Marks on Do. *6939*Material of Steam Pipes *Solid drawn copper (6 1/2 x 5/8 + 5 x 1/2)* Test pressure *400 lbs*Is an installation fitted for burning oil fuel *no* 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 *yes* If so, state name of vessel *S.S. "Ellawood", Indt Rpt N° 8926*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 boilers and main steam pipes were tested by hydraulic pressure**and the engines and boilers examined under steam and all found satisfactory.**The machinery is now in a good and safe working condition and**renders the vessel eligible in our opinion to have the notation of LMC-6.15**in the Register Book*

It is submitted that
this vessel is eligible for
THE RECORD + LMC 6.15.

The amount of Entry Fee ... £ *35-0-0* When applied for, *25/6/1915*
 Special ... £ *35-1-9*
 Donkey Boiler Fee ... £ *✓*
 Travelling Expenses (if any) £ *28/6/1915*

Committee's Minute *FRI. JUL. 2-1915*Assigned *+ LMC 6.15*MACHINERY CERTIFICATE
WRITTEN

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Foundation