

REPORT ON MACHINERY.

No. 9971

Received at London Office THU. 13 DEC. 1917

Date of writing Report

When handed in at Local Office

8.12.17

Port of

Middlesbrough

No. in Survey held at
Reg. Book.

Stockton-on-Tees

Date, First Survey

19th June 17

Last Survey

3rd Dec. 1917

on the

Steel Screw Steamer "BRYNTAWE"

(S.S. No. 654)

Gross 3364

Net 2094

Master

John Dickson

Built at

Stockton

By whom built

Messrs Richardson Duck & Co

When built

1917

Engines made at

Stockton

By whom made

Messrs Blair & Co Ltd (No 1849)

when made

1917

Boilers made at

Stockton

By whom made

Messrs Blair & Co Ltd

when made

1917

Registered Horse Power

Owners

H & B Coldberg

Port belonging to

Swansea

Nom. Horse Power as per Section 28

308

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

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 W. Iron

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.

Dia. of Tunnel shaft

as per rule 11.84

Dia. of Crank shaft journals

as per rule 12.43

Dia. of Crank pin

13.5

Size of Crank webs 24 x 8.5

collars

13.5

Dia. of screw

17-0

Pitch of Screw

16-6

No. of Blades

4

State whether moveable

no

Total surface

82 sq ft

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

4.5

Stroke

30

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2

Sizes of Pumps

9 x 8

5 x 8

No. and size of Suction's connected to both Bilge and Donkey pumps

In Engine Room 3 @ 3.5 & one @ 3.5 Dry tank under boilers In Holds, &c. 2 @ 3.5 in each hold, Tunnel with one @ 2.5

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

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

suctions to forward holds

How are they protected

wood casing

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

3.10.17

of Stern Tube

3.10.17

Screw shaft and Propeller

29.10.17

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 (A))

Manufacturers of Steel

Messrs John Spencer & Sons Ltd

Total Heating Surface of Boilers

4900

Is Forced Draft fitted

no

No. and Description of Boilers

Two single ended

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

25.10.17

No. of Certificate

5821

Can each boiler be worked separately

yes

Area of fire grate in each boiler

57.5 sq ft

No. and Description of Safety Valves to

each boiler

2 direct spring

Area of each valve

8.29

Pressure to which they are adjusted

185 lb

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-0"

Mean dia. of boilers

16'-0"

Length

10'-6"

Material of shell plates

steel

Thickness

1.5

Range of tensile strength

29.5 - 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

1.5

Pitch of rivets

8.5

Lap of plates or width of butt straps

19.5 x 1.5

Per centages of strength of longitudinal joint

plate

85.2

Working pressure of shell by rules

184

Size of manhole in shell

16" x 12"

Size of compensating ring

7.5 x 1.5

No. and Description of Furnaces in each boiler

3 Morrison

Material

steel

Outside diameter

47.5

Length of plain part

top

bottom

Thickness of plates

crown

27

Description of longitudinal joint

weld

No. of strengthening rings

yes

Working pressure of furnace by the rules

192

Combustion chamber plates: Material

steel

Thickness: Sides

1.5

Back

1.5

Top

1.5

Pitch of stays to ditto: Sides

9.5 x 9

Back

8.5 x 8.5

Top

10 x 8.5

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

185

Material of stays

IRON

Diameter at smallest part

1.99

Area supported by each stay

72.4

Working pressure by rules

248

End plates in steam space

yes

Material

steel

Thickness

1.5

Pitch of stays

17.5 x 12.1

How are stays secured

nuts & washers

Working pressure by rules

188

Material of stays

IRON

Diameter at smallest part

1.982

Area supported by each stay

34.5

Working pressure by rules

205

Material of Front plates at bottom

steel

Thickness

1.5

Greatest pitch of stays

16 x 8.5

Working pressure of plate by rules

239

Diameter of tubes

3.5

Pitch of tubes

4.5 x 4.5

Material of tube plates

steel

Thickness: Front

1.5

Back

1.5

Mean pitch of stays

11.5

Pitch across wide water spaces

14.5

Working pressures by rules

192

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

7.5 x 1.5

Length as per rule

27.5

Distance apart

10

Number and pitch of stays in each

2 @ 8.5

Working pressure by rules

189

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

yes

Working pressure of end plates

IS A DONKEY BOILER FITTED? yes

If so, is a report now forwarded? yes Indl. Rpt. 9918

SPARE GEAR. State the articles supplied:— Two each of main bearing, con. rod top end, bottom end, bolts and nuts; one set coupling bolts and nuts; one set of feed and bilge pump valves; iron of various sizes; assorted bolts and nuts; one set each H.P. & M.P. piston & cross bottom rings

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

Geo. H. H. H. H.

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1917. June 19. 21. July 30. Sep. 6. 10. 11. 13. 14. 17. 18. 19. 20. 22. 24. 26. 28. 30. Oct. 1. 3. 5. 8. 10. 11. 12. 15. 18. 19. 22. 24. 25. 29. Nov. 2. 6. 7. 19. 22. 26. 27. 29. Dec. 3.
Total No. of visits 39.

Is the approved plan of main boiler forwarded herewith yes
" " " donkey " " " yes

Dates of Examination of principal parts—Cylinders 28. 9. 17 Slides 1. 10. 17 Covers 28. 9. 17 Pistons 28. 9. 17 Rods 1. 10. 17
Connecting rods 5. 10. 17 Crank shaft 3. 10. 17 Thrust shaft 11. 9. 17 Tunnel shafts 19. 6. 17 30. 7. 17 Screw shaft 24. 10. 17 Propeller 24. 10. 17
Stern tube 20. 9. 17 Steam pipes tested 17. 7. 17 Engine and boiler seatings 3. 10. 17 Engines holding down bolts 7. 11. 17
Completion of pumping arrangements 22. 11. 17 Boilers fixed 22. 11. 17 Engines tried under steam 22. 11. 17
Main boiler safety valves adjusted 22. 11. 17 Thickness of adjusting washers P. B. 5-13/32 Star B. 5-3/8f
Material of Crank shaft Ing. Steel Identification Mark on Do. 7113 Material of Thrust shaft Ing. Steel Identification Mark on Do. 1855-N
Material of Tunnel shafts Ing. Steel Identification Marks on Do. 1855-N Material of Screw shafts W. Iron Identification Marks on Do. 7113
Material of Steam Pipes Lap welded steel (5 1/2" x 1/4") Test pressure 540 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 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 boilers 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 my opinion to have the notation of LMC-12.17 in the Register Book.

The vessel is fitted with Electric Light and "Wireless"

It is submitted that
this vessel is eligible for
THE RECORD + LMC-12.17.

The amount of Entry Fee ... £ 3-0-0 When applied for, 7/12/17
Special ... £ 35-8-0
Donkey Boiler Fee ... £
Travelling Expenses (if any) £

Committee's Minute FRI. DEC. 14 1917.

Assigned

Wm Morrison
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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Foundation