

REPORT ON MACHINERY.

No. 27304

Received at London Office

MON. 12 AUG. 1918

Date of writing Report

19

When handed in at Local Office

10 AUG 1918

Port of

Sunderland

No. in Survey held at
Reg. Book.

Sunderland

Date, First Survey

28 Dec 17

Last Survey

25 July 1918

(Number of Visits)

29

Gross

3124

Tons

Net

1877

Master

Milburn

Built at

Sunderland

By whom built

Blumer & Co. (N^o 247)

When built

1918

Engines made at

Sunderland

By whom made

J. Dickinson & Sons Ltd (N^o 824)

when made

1918

Boilers made at

Sunderland

By whom made

J. Dickinson & Sons Ltd (825)

when made

1918

Registered Horse Power

Owners the Shipping Controller (H.M. S. S. 100)

Port belonging to

London

Nom. Horse Power as per Section 28

430

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

25"

41"

68"

Length of Stroke

45"

Revs. per minute

80

Dia. of Screw shaft

as per rule 13.58"

as fitted 14.1"

Material of screw shaft

Superior

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

-

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

-

If two

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

-

Length of stern bush

5'-0"

Dia. of Tunnel shaft

as per rule 12.4"

as fitted 12.1"

Dia. of Crank shaft journals

as per rule 13.03"

as fitted 13.1"

Dia. of Crank pin

13 1/4"

Size of Crank webs

8 3/4" x 2 1/2"

Dia. of thrust shaft under

collars

collars

13 1/4"

Dia. of screw

16'-0"

Pitch of Screw

16'-3"

No. of Blades

4

State whether moveable

no

Total surface

75 ft²

No. of Feed pumps

2

Diameter of ditto

3 1/2"

Stroke

24"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2"

Stroke

24"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

SIZES OF PUMPS

10 1/2" x 12 1/2" x 2 1/2"

20 9 1/2" x 7" x 18"

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

In Engine Room

4 @ 3"

In Holds, &c. N^o 1 hold 2 @ 3". N^o 2 hold 2 @ 3"bross linker 2 @ 3". N^o 3 hold 2 @ 3". N^o 4 hold 2 @ 3 1/2" & 1 @ 3 1/2". Tunnel well 1 @ 2 1/2".

No. of Bilge Injections

2

sises

8"

Connected to condenser, or to circulating pump

b.p.

Is a separate Donkey Suction fitted in Engine room & size

yes

3 1/2"

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

main below all other above

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

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

forward hold suction

How are they protected

under timber board

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

access by tank from deck

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

no

worked from

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

J. M. Spence & Sons Ltd.

Total Heating Surface of Boilers

6304 ft²

Is Forced Draft fitted

yes

No. and Description of Boilers

three single ended marine

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

14-6-18

No. of Certificate

3480

Can each boiler be worked separately

yes

Area of fire grate in each boiler

51 ft²

No. and Description of Safety Valves to

each boiler

two direct spring

Area of each valve

8 1/2" x 9"

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

1'-8"

Mean dia. of boilers

14'-0"

Length

11'-8 1/2"

Material of shell plates

steel

Thickness

1 1/8"

Range of tensile strength

28 1/2 - 33 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

DR.

long. seams

DBS. TR

Diameter of rivet holes in long. seams

1 3/16"

Pitch of rivets

8 1/2"

Lap of plates or width of butt straps

1'-6"

Per centages of strength of longitudinal joint

rivets 86.1

plate 86

Working pressure of shell by rules

187

Size of manhole in shell

16" x 12"

Size of compensating ring

flanged

No. and Description of Furnaces in each boiler

3

Deighton

Material

steel

Outside diameter

3'-7"

Length of plain part

top

bottom

Thickness of plates

crown 1 1/2"

bottom 1 3/32"

Description of longitudinal joint

welded

No. of strengthening rings

-

Working pressure of furnace by the rules

190

Combustion chamber plates: Material

steel

Thickness: Sides

1 1/8"

Back

3/4"

Top

1 1/8"

Bottom

1 1/8"

Pitch of stays to ditto: Sides

9 3/8" x 9"

Back

9" x 10 1/2"

Top

9" x 9 3/8"

If stays are fitted with nuts or riveted heads

none

Working pressure by rules

194

Material of stays

steel

Area at smallest part

2.050

Area supported by each stay

9.450

Working pressure by rules

210

End plates in steam space:

Material

steel

Thickness

1 1/32"

Pitch of stays

23 3/4" x 19 1/2"

How are stays secured

BTRW

Working pressure by rules

181

Material of stays

steel

Area at smallest part

8.290

Area supported by each stay

46.40

Working pressure by rules

186

Material of Front plates at bottom

steel

Thickness

3/32"

Material of Lower back plate

steel

Thickness

29"

Greatest pitch of stays

13 1/2" x 9"

Working pressure of plate by rules

185

Diameter of tubes

2 3/4"

Pitch of tubes

4" x 4"

Material of tube plates

steel

Thickness: Front

3/32"

Back

3/4"

Mean pitch of stays

10"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

184

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

20 10 1/2" x 3"

Length as per rule

2-11 1/2"

Distance apart

9 3/8"

Number and pitch of stays in each

309"

Working pressure by rules

200

Steam dome: description of joint to shell

none

% of strength of joint

80

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

IS A DONKEY BOILER FITTED? *none*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— *Two connecting rod top and bottom end bolts and nuts two main bearing bolts, one set of coupling bolts one set of feed and bilge pump valves iron and bolts of various size. one propeller.*

The foregoing is a correct description,

John Dickinson & Sons, Limited.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1917. Dec 25. Feb 7. Mar 11. Apr 26. May 6. 7. 10. 13. 17. 24. 29. 31. Jun. 5. 10. 12. 13. 14. 18. 25. Jul 5. 8. 12. 15. 16. 18
During erection on board vessel - - - 19. 23. 24. 25
Total No. of visits 29

Is the approved plan of main boiler forwarded herewith *Yes.*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 21-5-18 Slides 12-6-18 Covers 6-5-18 Pistons 17-5-18 Rods 18-6-18

Connecting rods 31-5-18 Crank shaft 29-5-18 Thrust shaft 12-6-18 Tunnel shafts 12-6-18 Screw shaft 10-6-18 Propeller 5-6-18

Stern tube 10-5-18 Steam pipes tested 12-5-7-18 Engine and boiler seatings 6-6-18 Engines holding down bolts 16-19-7-18

Completion of pumping arrangements 25-7-18 Boilers fixed 15-7-18 Engines tried under steam 19-7-18

Completion of fitting sea connections 6-6-18 Stern tube 6-7-18 Screw shaft and propeller 6-7-18

Main boiler safety valves adjusted 19-7-18 Thickness of adjusting washers *Boiler both 7/8". best 1 1/4" 5/8". Steam 1 1/2" 5/8".*

Material of Crank shaft *2 steel* Identification Mark on Do. *3062 WC* Material of Thrust shaft *1 steel* Identification Mark on Do. *3063 N.W.C.*

Material of Tunnel shafts *2 steel* Identification Marks on Do. *3062 N.W.C.* Material of Screw shafts *5 1/2" iron* Identification Marks on Do. *7720 DW*

Material of Steam Pipes *lap welded wrought iron* Test pressure *540 lbs sq. in.*

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 *Standard type "C"*

General Remarks (State quality of workmanship, opinions as to class, &c. .)

The materials and workmanship are good.

The machinery has been constructed under special survey and is eligible in my opinion for classification and the record + LMC 7.18.

It is submitted that this vessel is eligible for THE RECORD. + LMC 7.18 F.D.

13-5-18 *APR*

The amount of Entry Fee ... £ : : When applied for, *Special* ... £ *69* : *8* : *5* : *1918*
Donkey Boiler Fee ... £ : : When received, *10* : *8* : *1918*
Travelling Expenses (if any) £ : : *10* : *8* : *1918*

Committee's Minute

Assigned

+ L.C. No. 7.18 F.D.

Surveyor's Signature



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