

REPORT ON MACHINERY.

No. 27288
FRI. 19 JUL 1918

Received at London Office

of writing Report

in When handed in at Local Office

18 JUL 1918

Port of

Sunderland

in Survey held at

Sunderland

Date, First Survey

22 May 17

Last Survey

12 July 1918

Reg. Book.

on the new steel 315" WAR SPANIEL.

(Number of Visits 39)

Gross 5227

Net 3193

Master

Work

Built at

Sunderland

By whom built

Short Brothers Ltd (No. 399)

When built

1918

Engines made at

Sunderland

By whom made

North Eastern Marine Eng Co Ltd (No. 2330)

when made

1918

Boilers made at

Sunderland

By whom made

North Eastern Marine Eng Co Ltd (No. 2330)

when made

1918

Registered Horse Power

517

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

37" 44" 73"

Length of Stroke

48"

Revs. per minute

75

Dia. of Screw shaft

14-68 as per rule 15-29" as fitted 1-5 1/2"

Material of screw shaft

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

in the propeller boss

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

yes

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

yes

Length of stern bush

5'-0 1/2"

Dia. of Tunnel shaft

as per rule 13-32" as fitted 1-1 1/2"

Dia. of Crank shaft journals

as per rule 14" as fitted 1-2 1/2"

Dia. of Crank pin

1-2 1/2"

Size of Crank webs

1-10 1/2" x 9"

Dia. of thrust shaft under collars

1-2 3/4"

Dia. of screw

17-6"

Pitch of Screw

16-6"

No. of Blades

4

State whether moveable

no

Total surface

982 sq ft

No. of Feed pumps

2

Diameter of ditto

4"

Stroke

2'-0"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

4"

Stroke

2'-0"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

Sizes of Pumps

1 @ 10 1/2" x 14" x 2 1/2" 2 @ 9 1/2" x 7" x 1 1/2"

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

In Engine Room

A @ 3 1/2"

In Holds, &c. No. 1 hold 2 @ 3 1/2" No. 2 hold 2 @ 3 1/2"

No. 3 hold 2 @ 3 1/2"

No. 4 hold 1 @ 3 1/2"

6 nos bunkers

2 @ 3 1/2"

Tunnel well

1 @ 3"

No. of Bilge Injections

1

sizes 9"

Connected to condenser, or to circulating pump

to P.

Is a separate Donkey Suction fitted in Engine room & size

yes 5 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

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

main below, others 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

forward hold suction

How are they protected

under timber boards

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

21-3-18

of Stern Tube

18-4-18

Screw shaft and Propeller

24-4-18

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

no

access by trunk from deck worked from

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

John Spence & Sons Ltd

Total Heating Surface of Boilers

7668 sq ft

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

18-3-18

No. of Certificate

3440

Can each boiler be worked separately

yes

Area of fire grate in each boiler

63 sq ft

No. and Description of Safety Valves to each boiler

two direct spring

Area of each valve

9.6 sq in

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boiler or uptakes and bunkers or woodwork

1'-8"

Mean dia. of boilers

15'-6"

Length

11'-8 1/2"

Material of shell plates

steel

Thickness

1 1/4"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

DR

Long. seams

DRS TR

Diameter of rivet holes in long. seams

1 5/16"

Pitch of rivets

9 1/8"

Lap of plates or width of butt straps

1-7 1/2"

Percentages of strength of longitudinal joint

ribs 88.2

Working pressure of shell by rules

182.2

Size of manhole in shell

16" x 12"

Size of compensating ring

flange

No. and Description of Furnaces in each boiler

3 Deighton

Material steel

Outside diameter 4'-2 3/16"

Length of plain part

top bottom

Thickness of plates

19" 32"

Description of longitudinal joint

welded

No. of strengthening rings

—

Working pressure of furnace by the rules

188

Combustion chamber plates: Material

steel

Thickness: Sides

2 3/32"

Back

1 1/16"

Top

2 3/32"

Bottom

2 3/32"

Pitch of stays to ditto: Sides

10 5/8" x 9 1/4"

Back

10 1/4" x 8 3/4"

Top

10 5/8" x 9 1/4"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

180

Material of stays

steel

Diameter at smallest part

2'-3 3/8"

Area supported by each stay

98.5 sq ft

Working pressure by rules

216 sq ft

End plates in steam space

—

Material

steel

Thickness

1 1/8"

Pitch of stays

2 1/2" x 2 1/4"

How are stays secured

DN&W

Working pressure by rules

180

Material of stays

steel

Diameter at smallest part

8'-2 9/16"

Area supported by each stay

473

Working pressure by rules

182

Material of Front plates at bottom

steel

Thickness

2 1/2"

Material of Lower back plate

steel

Thickness

2 1/2"

Greatest pitch of stays

13 5/8" x 8 3/4"

Working pressure of plate by rules

188

Diameter of tubes

2 1/4"

Pitch of tubes

4" x 3 1/8"

Material of tube plates

steel

Thickness: Front

3/32"

Back

3/4"

Mean pitch of stays

11 5/8" x 8"

Pitch across wide water spaces

IS A DONKEY BOILER FITTED? no 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 connecting bolts, one set of feed and bilge pump valves, iron and bolts of various sizes, one propeller.

The foregoing is a correct description, **FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD**

W.D. New Manufacturer.
Manager.

Dates of Survey while building { During progress of work in shops - - } 1917 May 21 22 Oct 22 Nov 21 Dec 18 19 28 Jan 18 22 23 28 Feb 1 4 6 12 14 18 22 Mar 4
{ During erection on board vessel - - - } 18 21 22 Apr 12 16 18 19 24 29 30 May 1 3 5 17 22 Jun 3 Jul 9 10 12
Total No. of visits (39) Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts - Cylinders 23-1-18 Slides 12-4-18 Covers 28-1-18 Pistons 12-4-18 Rods 22-2-18
Connecting rods 1-2-18 Crank shaft 4-2-18 Thrust shaft 13-12-17 Tunnel shafts 4-3-18 Screw shaft 22-3-18 Propeller 22-3-18
Stern tube 16-4-18 Steam pipes tested 30-4-18 Engine and boiler seatings 21-3-18 Engines holding down bolts 1-5-18
Completion of pumping arrangements 3-6-18 Boilers fixed 30-4-18 Engines tried under steam 3-5-18
Main boiler safety valves adjusted 3-5-18 Thickness of adjusting washers all 7/16
Material of Crank shaft Steel Identification Mark on Do 2975N WC Material of Thrust shaft Steel Identification Mark on Do 2975N WC
Material of Tunnel shafts Steel Identification Marks on Do 2975N WC Material of Screw shafts Steel Identification Marks on Do 2975N WC
Material of Steam Pipes lapwelded wrought iron Test pressure 540 lbs per 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 "B" type

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

W.D. 19/7/18
A.P.R.

The amount of Entry Fee ... £ : : When applied for, :
Special ... £ 116. 3 : : 13 7 19 18 :
Donkey Boiler Fee ... £ : : : :
Travelling Expenses (if any) £ : : : :
TUE 23 JUL 1918

J. L. Davis
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
Assigned + L.M.C 7. 18 T.D.

SUNDERLAND

Committee's Minute

MACHINERY CERTIFICATE WRITTEN