

# REPORT ON MACHINERY

No. 27894

Received at London Office

TUE. AUG. 3 1920

Date of writing Report

19

When handed in at Local Office

31 JUL 1920

Port of

SUNDERLAND

No. in Survey held at

SUNDERLAND

Date, First Survey

21 Oct 19

Last Survey

29 July 1920

Reg. Book

on the "KINCARDINE"

(Number of Visits

33

Tons

Gross 6503

Net 4088

Master

Built at Sunderland

By whom built

Messrs Wm Doxford & Sons (519)

When built

1920

Engines made at

Sunderland

By whom made

Messrs Wm Doxford & Sons (519)

when made

1920

Boilers made at

Sunderland

By whom made

Messrs Wm Doxford & Sons (519)

when made

1920

Registered Horse Power

Owners

Grindon & Co Ltd

Port belonging to

Newcastle

Com. Horse Power as per Section 28

565

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

410

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

27, 44 1/2, 75

Length of Stroke

54

Revs. per minute

70

Dia. of Screw shaft

as per rule 15.16

Material of

Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

410

Is the after end of the liner made water tight

the propeller boss 410 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'-10"

Dia. of Tunnel shaft

as per rule 13.91

Dia. of Crank shaft journals

as per rule 14.6

Dia. of Crank pin

14 3/4

Size of Crank webs

20 3/4 x 9 3/4

Dia. of thrust shaft under

lars 14 3/4

Dia. of screw

18.0

Pitch of Screw

18.0

No. of Blades

4

State whether moveable

No

Total surface

102.9

No. of Feed pumps

2

Diameter of ditto

5"

Stroke

30"

Can one be overhauled while the other is at work

410

No. of Bilge pumps

2

Diameter of ditto

5"

Stroke

30"

Can one be overhauled while the other is at work

410

No. of Donkey Engines

4

Sizes of Pumps

10 1/2 x 8 x 7 1/2 6 x 8 x 8

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

Engine Room

4 @ 3 1/2"

In Holds, &c. 2 in each hold 3 1/2" run in aft hold 4 1/2"

No. of Bilge Injections

1

sizes

9"

Connected to condenser, or to circulating pump

410

Is a separate Donkey Suction fitted in Engine room & size

4 1/2 3 1/2"

Are all the bilge suction pipes fitted with roses

410

Are the roses in Engine room always accessible

410

Are the sluices on Engine room bulkheads always accessible

Yes

Are all connections with the sea direct on the skin of the ship

410

Are they Valves or Cocks

Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

410

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

410

Are the Blow Off Cocks fitted with a spigot and brass covering plate

410

Are that pipes are carried through the bunkers

Yes

How are they protected

—

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

410

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

410

Are the Screw Shaft Tunnel watertight

410

Is it fitted with a watertight door

410

worked from upper platform

Are the Boilers, &c.—(Letter for record

S

Manufacturers of Steel

Spencer & Sons

Heating Surface of Boilers

8271

Is Forced Draft fitted

410

No. and Description of Boilers

Three single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

16.2, 28.2, 5.3.20 No. of Certificate 3659, 3663, 3666

Can each boiler be worked separately

410

Area of fire grate in each boiler

62.9

No. and Description of Safety Valves to

Each boiler

Two spring valves

Area of each valve

12.56 sq"

Pressure to which they are adjusted

Are they fitted with easing gear

410

Is the smallest distance between boilers or uptakes and bunkers or woodwork

no bunkers in way of tubes

Mean dia. of boilers

15.9 1/2

Length

12.0

Material of shell plates

S

Thickness

1 1/4

Range of tensile strength

Not less than 28 1/2 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Lap & b

g. seams

1 1/4 in

Diameter of rivet holes in long. seams

1 1/4

Pitch of rivets

8 1/2

Lap of plates or width of butt straps

18"

Are the percentages of strength of longitudinal joint

rivets 85.3

plate

Working pressure of shell by rules

181

Size of manhole in shell

12 x 16

End

Are the lengths of plain part

top 3 5/8

bottom 3 5/8

Thickness of plates

3 5/8

Description of longitudinal joint

Welded

No. of strengthening rings

—

Working pressure of furnace by the rules

198

Combustion chamber plates: Material

S

Thickness: Sides

19/32

Back

19/32

Top

19/32

Bottom

15/16

Are the pitches of stays to ditto: Sides

8 x 8 3/8

Back

8 x 8 3/8

Top

8 5/8 x 7 5/8

If stays are fitted with nuts or riveted heads

9 nuts

Working pressure by rules

180

Are the material of stays

S

Area at smallest part

1.73

Area supported by each stay

67.0

Working pressure by rules

206

End plates in steam space:

Are the material

S

Thickness

1 1/4

Pitch of stays

16 x 18

How are stays secured

22 x 14

Working pressure by rules

184

Material of stays

S

Are the area at smallest part

5.05

Area supported by each stay

288.0

Working pressure by rules

182

Material of Front plates at bottom

S

Are the thickness

7/8

Material of Lower back plate

S

Thickness

13/16

Greatest pitch of stays

13 1/2 x 8

Working pressure of plate by rules

185

Mean pitch of stays

9 3/8

Are



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:—

Two top end, two bottom end connecting rods bolts & nuts, two main bearing bolts, one set coupling bolts one set fuel and bilge pump valves, assorted bolts and nuts, some of various sizes, one propeller

The foregoing is a correct description,

WILLIAM DOXFORD & SONS, Limited

*W. J. D. Lins*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1919 Oct 21.30 Nov 11.25 Dec 23.31 Jan 6.19 22.26 27 Feb 5.19 16.22 Mar 5.25  
During erection on board vessel -- Apr 7.12 21.24 May 7.19 June 1.2.7.14 22.29 Jul 12.15 22.29  
Total No. of visits (33) Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 26.4.20 Slides 26.4.20 Covers 26.4.20 Pistons 26.4.20 Rods 5.2.20

Connecting rods 19.5.20 Crank shaft 7.5.20 Thrust shaft 7.5.20 Tunnel shafts 7.5.20 Screw shaft 4.6.20 Propeller 3.6.20

Stern tube 5.2.20 Steam pipes tested 7.4.20 Engine and boiler seatings 21.4.20 Engines holding down bolts 29.6.20

Completion of pumping arrangements 28.7.20 Boilers fixed 21.4.20 Engines tried under steam 28.7.20

Completion of fitting sea connections 27.1.20 Stern tube 1.6.20 Screw shaft and propeller 29.6.20

Main boiler safety valves adjusted 28.7.20 Thickness of adjusting washers  $P^5 B^4 P^3 5 \frac{13}{32}$   $Int B^4 P^3 5 \frac{7}{8}$   $Str B^4 P^3 5 \frac{7}{8}$

Material of Crank shaft Steel Identification Mark on Do. 519 GAH Material of Thrust shaft Steel Identification Mark on Do. 519 GAH

Material of Tunnel shafts Steel Identification Marks on Do. 519 GAH Material of Screw shafts Steel Identification Marks on Do. 519 GAH

Material of Steam Pipes Copper Test pressure 36 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 — If so, state name of vessel —

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

The machinery of this vessel has been constructed under special survey. The materials and workmanship are sound and good and under the vessel eligible in my opinion to have record of + LMC 7.20.

It is submitted that this vessel is eligible for THE RECORD + LMC 7.20. F.D

RCM

5/8/20

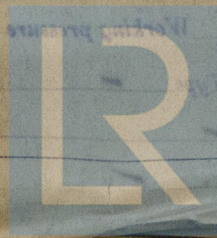
The amount of Entry Fee £ 3 : : When applied for, 30 JUL 1920  
Special £ 48 : 5 :  
Donkey Boiler Fee £ : :  
Travelling Expenses (if any) £ : : When received, 13 Aug 1920

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.

MACHINERY CERT  
WRITTEN.



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Foundation