

REPORT ON MACHINERY.

No. 72051.

Received at London Office, NEWCASTLE-ON-TYNE.

TUE 15 JUL 1919

Date of writing Report

19

When handed in at Local Office

11th July 1919 Port of

No. in Survey held at Newcastle-on-Tyne
Reg. Book.Date, First Survey 18 March 18 Last Survey 26^d June 1919

(Number of Plates 55

Gross 703

on the SCREW STEAMER "CANTERBURY BELL."

Tons }
Net 319

Master Built at L. Shields By whom built C. Remondson 1877 When built 1919

Engines made at L. Shields By whom made Shields Eng. & Dry Dock Co. Ltd. when made 1919

Boilers made at Newcastle-on-Tyne By whom made R.W. Hawthorn Leslie 1877 when made 1919

Registered Horse Power Owners Pile & Co. Port belonging to London

Nom. Horse Power as per Section 28 110 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 14 1/2 - 24 - 39 Length of Stroke 27 Revs. per minute 100 Dia. of Screw shaft as per rule 8 3/4 Material of screw shaft as fitted 8 1/2

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 on length 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 3' 2 1/2"

Dia. of Tunnel shaft as per rule 7 2/8 Dia. of Crank shaft journals as per rule 7 6/8 Dia. of Crank pin 7 1/2 Size of Crank webs 15 x 5 1/2 Dia. of thrust shaft under

collars 7 1/2 Dia. of screw 10 1/2 Pitch of Screw 11 1/2 No. of Blades 4 State whether moveable No Total surface 425 sq. ft.

No. of Feed pumps 2 Diameter of ditto 2 1/4 Stroke 12 1/2 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 1/4 Stroke 12 1/2 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps 5 1/2 x 3 1/2 6 x 4 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2 1/4" dia. In Holds, &c. Two 2" dia.

No. of Bilge Injections 1 sizes 3 1/2 Connected to condenser, or to circulating pump C.R. Is a separate Donkey Suction fitted in Engine room & size 2 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

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 Forward Suctions How are they protected Cased in

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 24/1/19 of Stern Tube 24/1/19 Screw shaft and Propeller 24/1/19

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer Sons Ltd.

Total Heating Surface of Boilers 2028 Is Forced Draft fitted No No. and Description of Boilers 2 Gylindric Multi Single

Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 12/10/18 No. of Certificate 9170

Can each boiler be worked separately Yes Area of fire grate in each boiler 33 sq. ft. No. and Description of Safety Valves to

each boiler 2: Relief Spring Area of each valve 3.976 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 About 48" Mean dia. of boilers 10 1/2 Length 10 1/2 Material of shell plates Steel

Thickness 3/32 Range of tensile strength 28/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap Double

long. seams 013 5/16 Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 6 1/2 Lap of plates or width of butt straps 15 1/2

Per centages of strength of longitudinal joint rivets 95.4 Working pressure of shell by rules 187 lb Size of manhole in shell 16" x 12"

Size of compensating ring 3 1/2 x 3 1/2 x 2 1/2 flanged No. and Description of Furnaces in each boiler 2: Plain Material Steel Outside diameter 27 1/2

Length of plain part top 80" bottom 69" Thickness of plates crown 2" bottom 2" Description of longitudinal joint Welded No. of strengthening rings None

Working pressure of furnace by the rules 192 lb Combustion chamber plates: Material Steel Thickness: Sides 5" Back 5" Top 5" Bottom 1"

Pitch of stays to ditto: Sides 8" x 9" Back 8" x 9" Top 8" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 186 lb

Material of stays Steel Diameter at smallest part 1 1/2 Area supported by each stay 42" Working pressure by rules 192 lb End plates in steam space:

Material Steel Thickness 1" Pitch of stays 18" x 12" How are stays secured Nuts Working pressure by rules 182 lb Material of stays Steel

Diameter at smallest part 1 1/2 Area supported by each stay 234" Working pressure by rules 203 lb Material of Front plates at bottom Steel

Thickness 1" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 15" Working pressure of plate by rules 234 lb

Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 1" Back 2" Mean pitch of stays 10 1/2

Pitch across wide water spaces 14 1/2 Working pressures by rules 202 lb 196 lb Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9" x 1 1/2 Length as per rule 25.6 Distance apart 9" Number and pitch of stays in each 2: 8"

Working pressure by rules 295 lb 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

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IS A DONKEY BOILER FITTED?

none

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:— 1 set Coupling Bolts, 1 set main Bearing Bolts, 1 set Crank Pin Bolts, 1 set Crosshead Bolts, 1 set Piston Pump valves, 1 set Relief Pump valves, 6 frame Ring Bolts, 2 escape valve springs, Bolts nuts assorted sizes none of various sizes.

The foregoing is a correct description.

ESTABLISHED & COY DOCK & LIMITED.

ESTD Shaw

Manufacturer.

Aug 8/19.

Dates of Survey while building
During progress of work in shops -- Mar 1918
During erection on board vessel -- 18.25. Apr 10.16.26. May 21.28. Jun 14.17. Jul 3.10.18.30. Aug 13.16.27.28.30.
Total No. of visits 53.

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 2/12/18 Slides 10/12/18 Covers 19/6/19 Pistons 2/12/18 Rods 26/8/18
Connecting rods 14/12/18 Crank shaft 2/12/18 Thrust shaft 13/12/18 Tunnel shafts 26/8/18 Screw shaft 11/4/19 Propeller 11/4/19
Stern tube 2/19 Steam pipes tested 22/1/19 Engine and boiler seatings 30/5/19 Engines holding down bolts 30/5/19
Completion of pumping arrangements 26/6/19 Boilers fixed 25/6/19 Engines tried under steam 19/6/19
Main boiler safety valves adjusted 24/5/19 Thickness of adjusting washers all 3/8" thick
Material of Crank shaft Steel Identification Mark on Do. 4124 Material of Thrust shaft Iron Identification Mark on Do. 3928
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do. 7656
Material of Steam Pipes Copper Test pressure 360 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 Engines and Boilers of this vessel were built under Special Survey and the workmanship is good. On completion they were examined under steam and found to work well.

The machinery throughout is now in good and efficient condition and eligible for opinion to have the record of L.M.C. 7.19. marked in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 6.19.

Roll

JUL 16.7.19
JIM

The amount of Entry Fee ... £ 2 :
Special ... £ 16 : 10 :
Donkey Boiler Fee ...
Travelling Expenses (if any) £

When applied for,

14 JUL 1919

When received,

3.9.19

Committee's Minute

FRI 25 JUL 1919

Assigned

L.M.C. 6.19

MACHINERY CERTIFICATE
WRITTEN



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