

REPORT ON MACHINERY.

No. 25608

TUE. MAR. 4-1913

Received at London Office

Date of writing Report 27-2-1913 When handed in at Local Office 1-3-1913 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 2 April 1912 Last Survey 27-2-1913

Reg. Book.

325 Supn the steel ship "SHARON"

(Number of Visits)

Gross 2278

Net 1389

Master J. Enos Built at Sunderland By whom built John Spencer & Sons Ltd (S/S No 147) When built 1913

Engines made at Sunderland By whom made George Blanks Ltd (No 961) when made 1913

Boilers made at Sunderland By whom made George Blanks Ltd (No 961) when made 1913

Registered Horse Power

Owners Ottoman Line Ltd

Port belonging to Newport Mon.

Nom. Horse Power as per Section 28 222

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 21" 35" 57"

Length of Stroke 39"

Revs. per minute 65

Dia. of Screw shaft

as per rule 12"

Material of screw shaft

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 4' 0"

Dia. of Tunnel shaft

as per rule 10.50"

as fitted 10.9"

Dia. of Crank shaft journals

as per rule 11.1"

as fitted 11.3"

Dia. of Crank pin 11 1/8"

Size of Crank webs 10 1/2" x 7 1/2"

Dia. of thrust shaft under

collars 11 3/4"

Dia. of screw 15.0"

Pitch of Screw 16.0"

No. of Blades 4

State whether moveable No

Total surface 69 sq ft

No. of Feed pumps 2

Diameter of ditto 2 3/4"

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 two

Sizes of Pumps 6.84 x 6.34 and 9.81 x 9.34

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

In Engine Room Two @ 2 3/4" and one @ 4"

In Holds, &c. Fore hold;—two @ 2 3/4" after hold;—

four @ 2 3/4"

Tunnel well;—one @ 2 3/4"

No. of Bilge Injections 1

sizes 4"

Connected to condenser, or to circulating pump

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 Fore hold sections

How are they protected Under 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 13-1-13 of Stern Tube 17-1-13

Screw shaft and Propeller 10-2-13

Is the Screw Shaft Tunnel watertight Yes

Is it fitted with a watertight door Yes

worked from Top platform

BOILERS, &c.—(Letter for record (S))

Manufacturers of Steel John Spencer & Sons Ltd & Gewerkschaft Deutscher Kaiser

Total Heating Surface of Boilers 3463 sq ft

Is Forced Draft fitted No

No. and Description of Boilers Two single ended marine

Working Pressure 180

Tested by hydraulic pressure to 360

Date of test 3-12-12

No. of Certificate 3043

Can each boiler be worked separately Yes

Area of fire-grate in each boiler 52 sq ft

No. and Description of Safety Valves to

each boiler two direct spring

Area of each valve 7.06 sq in

Pressure to which they are adjusted 185

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18"

Mean dia. of boilers 13.6"

Length 10.6"

Material of shell plates Steel

Thickness 1 1/16"

Range of tensile strength 29.5-33

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams 19.5

long. seams 19.5

Diameter of rivet holes in long. seams 1 1/16"

Pitch of rivets 6 7/8"

Lap of plates on width of butt straps 16"

Per centages of strength of longitudinal joint

rivets 90

plate 84.5

Working pressure of shell by rules 185

Size of manhole in shell 16" x 13"

Size of compensating ring Flanged

No. and Description of Furnaces in each boiler 3 plain

Material Steel

Outside diameter 3' 3 3/4"

Length of plain part

top 6' 2 9/16"

bottom 5' 11"

Thickness of plates

crown 3 1/2"

bottom 3 1/2"

Description of longitudinal joint welded

No. of strengthening rings none

Working pressure of furnace by the rules 180

Combustion chamber plates: Material Steel

Thickness: Sides 1 1/16"

Back 1 1/16"

Top 1 1/16"

Bottom 1 1/16"

Pitch of stays to ditto: Sides 8 3/4" x 10 1/8"

Back 9 1/4" x 9 1/8"

Top 8 3/8" x 10 1/2"

If stays are fitted with nuts or riveted heads Nuts in crescent

Working pressure by rules 181

Material of stays Steel

Diameter at smallest part 2 3/16"

Area supported by each stay 110 sq in

Working pressure by rules 180

End plates in steam space

Material Steel

Thickness 1 3/8"

Pitch of stays 18" x 22"

How are stays secured 19.7

Working pressure by rules 182

Material of stays Steel

Diameter at smallest part 6 1/4"

Area supported by each stay 351

Working pressure by rules 192

Material of Front plates at bottom Steel

Thickness 1 3/16"

Material of Lower back plate Steel

Thickness 3 3/8"

Greatest pitch of stays 15" x 9 1/4"

Working pressure of plate by rules 182

Diameter of tubes 3 1/4"

Pitch of tubes 4 1/2" x 4 3/8"

Material of tube plates Steel

Thickness: Front 1 3/16"

Back 3/4"

Mean pitch of stays 10"

Pitch across wide water spaces 14 1/2"

Working pressures by rules Back-204

Girders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 20 7/8" x 4 1/2"

Length as per rule 2' 4 3/8"

Distance apart 10 1/2"

Number and pitch of stays in each 2 @ 8 3/8"

Working pressure by rules 181

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

Lloyd's Register

Foundation

W768-0041

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. Description
 Made at By whom made When made Where fixed
 Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety
 Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment
 If fitted with casing gear If steam from main boilers can enter the donkey boiler Dia. of donkey boiler Length
 Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams
 Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Rivets
 Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays Plates
 Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint
 Working pressure of furnace by rules Thickness of furnace crown plates Radius of do. Stayed by
 Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

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, helge, air and
 circulating pump valves, iron and bolts of various sizes, one propeller.

The foregoing is a correct description,
 FOR GEORGE CLARK, LIMITED.

Manufacturer. of the Engines & Boilers.

698/11111

Dates of Survey while building
 During progress of work in shops -- 1912. Apr. 2. 29 May 7. 9. 17 Jun 5. 11. 13. 21 Jul 12. 19 Aug 23. Sept 20. Oct 1. 11. 14. 17. 20
 During erection on board vessel -- Nov 12. 14. Dec 5. 31. Jan 8. 10. 13. 17 Feb 6. 7. 10. 12. 13. 17. 18. 25. 27
 Total No. of visits (35)

Is the approved plan of main boiler forwarded herewith

yes
 none

Dates of Examination of principal parts—Cylinders 20-9-12 Slides 1-10-12 Covers 11-10-12 Pistons 7-5-12 Rods 12-11-12
 Connecting rods 21-6-12 Crank shaft 19-7-12 Thrust shaft 19-7-12 Tunnel shafts 11-10-12 Screw shaft 10-1-13 Propellers 19-11-12
 Stern tube 8-1-13 Steam pipes tested 13-2-13 Engine and boiler seatings 13-1-13 Engines holding down bolts 17-2-13
 Completion of pumping arrangements 25-2-13 Boilers fixed 13-2-13 Engines tried under steam 18-2-13
 Main boiler safety valves adjusted 18-2-13 Thickness of adjusting washers Port 13/16 - P 3/8 5 3/8 full. 5 1/2 full.
 Material of Crank shaft 2. Steel Identification Mark on Do. 4686 PA Material of Thrust shaft 9. Steel Identification Mark on Do. 3851 HK
 Material of Tunnel shafts 2. Steel Identification Marks on Do. 3853 HK, 3810 HK, 3932 HK.
 Material of Screw shafts 9. Steel Identification Marks on Do. 3852 HK.
 Material of Steam Pipes Solid drawn copper 40416. Test pressure 400 lbs per square inch.

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

The materials and workmanship are good
 The machinery has been made under Special Survey and is eligible in
 my opinion for classification and the record. LMC 2.13

It is submitted that
 this vessel is eligible for
 THE RECORD + LMC 2.13.

JWD.
 4/3/13.

Heurisle Davis.

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

The amount of Entry Fee .. £ 2 : : When applied for.
 Special .. £ 31. 2 : : 9. 3. 10. 13.
 Donkey Boiler Fee .. £ : : When received.
 Travelling Expenses (if any) £ : : 5/31/13

Committee's Minute

FRI. MAR. 7--1913

Assigned

+ LMC 2.13

LOYD'S REGISTER
 FOUNDATION



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