

REPORT ON MACHINERY

No. 32903

Received at London Office

Date of writing Report 19 When handed in at Local Office

3/8/1921 Port of Hull

No. in Survey held at Reg. Book.

Date, First Survey

3-8-20 Last Survey

3/8/1921

on the S.S. No 439

Farfield

(Number of Visits 50)

Gross Tons

Net Tons

Master

Built at

Cavalier

By whom built

Robt. Wether & Co. Ltd.

When built

1921

Engines made at

Hull

By whom made

Shas & Holmes & Co. Ltd.

when made

1921

Boilers made at

Hull

By whom made

Shas & Holmes & Co. Ltd.

when made

1921

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28 85

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders

13"-23"-37"

Length of Stroke

24"

Revs. per minute

112

Dia. of Screw shaft

as per rule

14"

Material of

Hull

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

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

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

Length of stern bush 22"

Dia. of Tunnel shaft

as per rule

6"

Dia. of Crank shaft journals

as per rule

5.9"

Dia. of Crank pin

7.4"

Size of Crank webs

14x48"

Dia. of thrust shaft under

collars

7.4"

Dia. of screw

9.9"

Pitch of Screw

10-15"

No. of Blades

4

State whether moveable

No

Total surface

38 sq

No. of Feed pumps

one

Diameter of ditto

3"

Stroke

14.5"

Can one be overhauled while the other is at work

No. of Bilge pumps

one

Diameter of ditto

3"

Stroke

14.5"

Can one be overhauled while the other is at work

No. of Donkey Engines

one

Sizes of Pumps

6" x 4.5" x 6"

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

In Engine Room

2 @ 2.5"

In Holds, &c.

2 @ 2.5"

No. of Bilge Injections

one

sizes

3.5"

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

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

Yes

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

Yes

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

Hull water

How are they protected

Fire escapes

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

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

worked from

No

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

J. Spencer & Co. Ltd.

Total Heating Surface of Boilers

1470 sq

Is Forced Draft fitted

No

No. and Description of Boilers

Re cycl mult SE

Working Pressure

180 lbs

Tested by hydraulic pressure to

380 lbs

Date of test

1/3/21

No. of Certificate

3475

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

46.2 sq

No. and Description of Safety Valves to

each boiler

one double opening

Area of each valve

4.908

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

3'-0"

Mean dia. of boilers

13'-3"

Length

10'-3"

Material of shell plates

Steel

Thickness

1.5"

Range of tensile strength

28/32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

JRL

long. seams

TRBS

Diameter of rivet holes in long. seams

1.5"

Pitch of rivets

7.5"

Lap of plates or width of butt straps

1.5"

Per centages of strength of longitudinal joint

rivets

86.16%

Working pressure of shell by rules

plate

85.24%

Size of manhole in shell

16" x 12"

Size of compensating ring

7" x 1.5"

No. and Description of Furnaces in each boiler

3 Plain

Material

Steel

Outside diameter

3'-4"

Length of plain part

top

3'-6"

Thickness of plates

crown

3.5"

Description of longitudinal joint

Welded

No. of strengthening rings

-

Working pressure of furnace by the rules

185 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

3.5"

Back

3.5"

Top

3.5"

Bottom

Pitch of stays to ditto: Sides

9.5" x 10"

Back

9.5" x 8.5"

Top

9.5" x 10"

If stays are fitted with nuts or riveted heads

No

Working pressure by rules

185 lbs

End plates in steam space:

Material of stays

Steel

Area at smallest part

2.07 sq

Area supported by each stay

95.5 sq

Working pressure by rules

185 lbs

Material of stays

Steel

Thickness

Area at smallest part

5.79 sq

Area supported by each stay

324 sq

Working pressure by rules

185 lbs

Material of Front plates at bottom

Steel

Thickness

1.5"

Greatest pitch of stays

Diameter of tubes

3.5"

Pitch of tubes

4.5" x 4.5"

Material of tube plates

Steel

Thickness: Front

1.5"

Back

1.5"

Mean pitch of stays

Pitch across wide water spaces

15"

Working pressures by rules

185 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

10.5" x 1.5"

Length as per rule

2-8.5"

Distance apart

Working pressure by rules

268 lbs

Steam dome: description of joint to shell

-

% of strength of joint

-

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

-

Thickness

-

How stayed

-

SUPERHEATER. Type

-

Date of Approval of Plan

Date of Test

-

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

-

Diameter of Safety Valve

-

Pressure to which each is adjusted

-

Is Easing Gear fitted

-

Tested by Hydraulic Pressure to

Date of Test

-

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Diameter of Safety Valve

-

Pressure to which each is adjusted

-

Is Easing Gear fitted

-

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 two main bearing
one set coupling bolts & nuts, one set air feed & bilge pump
valves, one main & one donkey check valve & seat, two donkey
pump valves & junk ring & studs & nuts, one safety valve spring
a quantity of assorted bolts & nuts & iron of various sizes.

The foregoing is a correct description,

For CHARLES D. HOLMES & Co. LTD.

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1920: Aug 3, 20, 24, 30, 31, Sep 17, Nov 1, 19, Dec 2, 9, 10, 13, 14, 16, 20, 24, 31, 1921: Jan 10
During erection on board vessel - 14, 17, 20, 21, 24, 26, 31, Feb 2, 10, 11, 14, 16, 17, 18, 20, 24, Mar 1, 2, 14, 21, 22, 23, 30, Apr 1, 9
Total No. of visits 50.

Is the approved plan of main boiler forwarded herewith?

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 10/2/21 Slides 10/2/21 Covers 10/2/21 Pistons 10/2/21 Rods 13/12/20

Connecting rods 10/2/21 Crank shaft 10/1/21 Thrust shaft 10/1/21 Tunnel shafts 10/1/21 Screw shaft 31/8/20 Propeller 31/8/20

Stern tube 31/8/20 Steam pipes tested 22/3/21 Engine and boiler seatings 23/3/21 Engines holding down bolts 23/3/21

Completion of pumping arrangements 27/7/21 Boilers fixed 12/4/21 Engines tried under steam 12/4/21

Completion of fitting sea connections 27/9/20 Stern tube 17/9/20 Screw shaft and propeller 17/9/20

Main boiler safety valves adjusted 12/4/21 Thickness of adjusting washers $3\frac{1}{2}$ " $5\frac{1}{8}$ "

Material of Crank shaft Steel Identification Mark on Do. 2532 Material of Thrust shaft Steel Identification Mark on Do. 2533

Material of Tunnel shafts Steel Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. 2491

Material of Steam Pipes Copper Test pressure 400 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? No If so, state name of vessel S.S. BEESTON.

General Remarks (State quality of workmanship, opinions as to class, &c.) The engines & boiler of this vessel have been built under special survey & the materials & workmanship are good.

On completion the machinery was tried under full working conditions while moored to the Quay Wall with satisfactory results.

The machinery throughout is now in a good & efficient condition & eligible in my opinion to have the record LMC-8-21 marked in Red in the British Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 8.21 CL

Recd 21/9/21

The amount of Entry Fee ... £ 2-0-0
Special ... £ 21-5-0
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
When applied for, 16.9.1921
When received, 6.10.1921

Committee's Minute FRI. 30 SEP. 1921

Assigned + LMC 8.21 C.L.



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