

Rpt. 4.

REPORT ON MACHINERY.

No. 42395.

Received at London Office

WED. 27 DEC. 1922

Date of writing Report

19

When handed in at Local Office

22.12.1922 Port of

Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey

Last Survey

Dec 1921 1922

78203 on the

S/S British Architect

(Number of Visits)

Gross

7388

Tons

Net

4394

Master

Built at

Glasgow

By whom built

Blythwood 820701

When built

1922

Engines made at

Glasgow

By whom made

Dunsmuir Jackson L^{td} (538)

when made

1922

Boilers made at

Glasgow

By whom made

Dunsmuir Jackson L^{td} (538)

when made

1922

Registered Horse Power

Owners

British Tankers Ltd

Port belonging to

London

Nom. Horse Power as per Section 28

616

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 25"-42 1/2"-42" Length of Stroke 54" Revs. per minute

Dia. of Screw shaft

as per rule 15" as fitted 16"

Material of screw shaft

S

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

-

If two

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

Yes

Length of stern bush

5' 4"

Dia. of Tunnel shaft as per rule 14 1/4" as fitted 14 3/4"

Dia. of Crank shaft journals as per rule 14 5/8" as fitted 15 1/4"

Dia. of Crank pin 15 1/4"

Size of Crank webs 29 1/2" x 10"

Dia. of thrust shaft under

collars 15 1/4"

Dia. of screw 18" 0"

Pitch of Screw 18" 6"

No. of Blades 4

State whether moveable

Yes

Total surface

107 sq ft

No. of Feed pumps

2

Diameter of ditto 4 1/4"

Stroke 26"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto 4 1/4"

Stroke 26"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

4

Sizes of Pumps 10 1/2" x 8" 2" 1/2" x 8" 2" 1/2" x 8"

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

In Engine Room 2 2 3/4" P+S 1 1" 3/2"

In Engine Room

2

2 3/4" P+S 1 1" 3/2"

In Holds, &c.

2 3 1/2" Stokehold P+S

No. of Bilge Injections

8

Connected to main or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

Yes 3 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

Both

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

None

How are they protected

-

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

None

Is it fitted with a watertight door

-

worked from

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Steel Co of Scotland & Spencer

Total Heating Surface of Boilers

921 6 sq ft

Is Forced Draft fitted

Yes

No. and Description of Boilers

3 Single Ended

Working Pressure

215

Tested by hydraulic pressure to

430

Date of test

8-8-22

No. of Certificate

16093

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

64 5/8 sq ft

No. and Description of Safety Valves to

each boiler

Double Spring

Area of each valve

11.04 sq ft

Pressure to which they are adjusted

220

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

16.15"

Length

2.0"

Material of shell plates

S

Thickness

1 1/2"

Range of tensile strength

29.33

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

DR

long. seams

TR DBS

Diameter of rivet holes in long. seams

17/32"

Pitch of rivets

10 1/2"

Tap of plates or width of butt straps

1-10 3/4"

Per centages of strength of longitudinal joint

rivets 86.9%

plate 86.4%

Working pressure of shell by rules

215

Size of manhole in shell

16" x 12"

Size of compensating ring

29 1/2" x 3 1/2" x 1 1/2"

No. and Description of Furnaces in each boiler

3 Bored

Material

Outside diameter

4.3"

Length of plain part

top

Thicknes of plates

bottom

Description of longitudinal joint

weld

No. of strengthening rings

29 3/4"

Working pressure of furnace by the rules

218

Combustion chamber plates: Material

S

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

29 3/4"

Pitch of stays to ditto: Sides

4 x 9 5/8"

Back

9 1/2" x 9 1/2"

Top

9 x 9"

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules

225

Material of stays

S

Area at smallest part

23 1/2" x 3 1/2" x 1 1/2"

Area supported by each stay

84 3/5"

Working pressure by rules

247

End plates in steam space:

Material

S

Thickness

1 1/2"

Pitch of stays

22 1/2" x 1 1/2"

How are stays secured

DN

Working pressure by rules

222

Material of stays

S

Area at smallest part

829"

Area supported by each stay

41 2/3"

Working pressure by rules

216

Material of Front plates at bottom

S

Thickness

1 1/2"

Material of Lower back plate

S

Thickness

3/32"

Greatest pitch of stays

14 3/4" x 9 1/2"

Working pressure of plate by rules

228

Diameter of tubes

2 1/2"

Pitch of tubes

33 1/4" x 33 1/4"

Material of tube plates

S

Thickness: Front

1 1/6"

Back

27/32"

Mean pitch of stays

-

Pitch across wide water spaces

3 1/2"

Working pressures by rules

218

Girders to Chamber tops: Material

Iron

Depth and

thickness of girder at centre

10 x 1" (2)

Length as per rule

36 3/32"

Working pressure by rules

221

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

-

Tested by Hydraulic Pressure to

-

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

-

Date of Test

-

Pressure to which each is adjusted

-

Is Easing Gear fitted

-

-

-

-

Diameter of Safety Valve

-

-

-

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-

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 Connecting Rod bolts for top end, bolts for bottom end, 2 main bearing bolts, 1 set of coupling bolts 1 set of feed & bilge pump bolts 1 set of piston rings. a quantity of assorted bolts nuts & steel of various sizes.

The foregoing is a correct description,

DUNSMUIR & JACKSON, Limited.

Manufacturer.

Dates of Survey while building

During progress of work in shops --
During erection on board vessel --
Total No. of visits

1922 Jan 17, Feb 25, Mar 1-22-24, Apr 12-27, May 3-5, June 1-17, July 5, Aug 2-11-16-22.
1921 2-22-28, Oct 4-5-7-22, Nov 7-22, (1922) Jan 11-22-23-25-27, Feb 9-16-17-22, Mar 6-24-27,
Apr 19-27, May 1-16-18-24, June 6, July 5, Aug 1-8-11-15-22, Sept 4-8-14-18-19-27, Oct 4-12-17-19, Nov 3-7-15-17-22, Dec 4-19.

Is the approved plan of main boiler forwarded herewith? *Yes*

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders 11-8-22 Slides 8-8-22 Covers 1-8-22 Pistons 5-10-21 Rods 6-6-22

Connecting rods 6-6-22 Crank shaft 4-11-21 Thrust shaft 4-11-21 Tunnel shafts 19-4-22 Screw shaft 16-5-22 Propeller 5-7-22

Stern tube 1-8-22 Steam pipes tested 4-9-22 Engine and boiler seatings 19-9-22 Engines holding down bolts 23-11-22

Completion of pumping arrangements 24-10-22 Boilers fixed 24-10-22 Engines tried under steam 19-12-22

Completion of fitting sea connections 19-9-22 Stern tube 19-9-22 Screw shaft and propeller 19-9-22

Main boiler safety valves adjusted 23-11-22 Thickness of adjusting washers P 9/32 S 1/16 P 3/8 S 3/8 F 29/64 A 1/32 5/16-9/32

Material of Crank shaft S Identification Mark on Do. LLOYDS 538 Material of Thrust shaft S Identification Mark on Do. LLOYDS

Material of Tunnel shafts S Identification Marks on Do. W.G.M Material of Screw shafts S Identification Marks on Do. W.G.M

Material of Steam Pipes Iron Test pressure 645

Is an installation fitted for burning oil fuel *Yes* Is the flash point of the oil to be used over 150°F. *Yes*

Have the requirements of Section 49 of the Rules been complied with *Yes*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *S/S TOCO 41853 S/S Clukey 41853*

General Remarks (State quality of workmanship, opinions as to class, &c. *Pure Engines & Boilers have been built*

under special survey in accordance with the approved plans & the workmanship & material are of good quality & they have been securely fitted on board & run under steam of good satisfactory pressure. The machinery is eligible in my opinion to be entered with the record of L.M.C. 12-22. Notation of fitted for oil fuel 12-22 F.P. above 150°F

It is submitted that this vessel is eligible for

THE RECORD. + L.M.C. 12.22. F.D. C.L.

"Fitted for Oil Fuel" 12.22. F.P. above 150°F.

AP 13

28/12/22

The amount of Entry Fee ... £ 6- -

Special ... £ 105 : 16

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When applied for,

25/12/22

When received,

27/12/22

W. Gordon-Muir

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW

26 DEC. 1922

Assigned + L.M.C. 12.22.

W. Gordon-Muir

WRITTEN:

28/12/22

Fitted for oil fuel 12.22 F.P. above 150°F.

+ copy 15/1/23



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