

## REPORT ON MACHINERY.

No. 8420

Date of writing Report

19

When handed in at Local Office

19

Port of

Received at London Office

TUE. 27 FEB. 1923

No. in Survey held at Dundee

Date, First Survey 15 Nov. 1922 Last Survey 22 Feb 1923.

Reg. Book.

on the T.S.S. "MURITAI"

(Number of Visits 13.)

Master

Built at Montrose

By whom built Coastal Construction Co. Ltd. No. 17

Gross

Net

When built 1923

Engines made at Glasgow

By whom made McKie &amp; Baxter. No. 1081-2

when made

1922

Boilers made at Glasgow

By whom made Ross &amp; Duncan. No. 1672-3

when made

1922

Registered Horse Power

Owners Eastbourne Borough Council

Port belonging to Swellingfleet

Nom. Horse Power as per Section 28 130.

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

## ENGINES, &amp;c.—Description of Engines

Triple Expansion (Twin screws)

No. of Cylinders 6

No. of Cranks 6

Dia. of Cylinders 10 1/2 x 17 x 28

Length of Stroke 20"

Revs. per minute 120

Dia. of Screw shaft as per rule

Material of

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

Is the after end of the liner made water tight

in the propeller boss If the liner is in more than one length of the joint 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

Dia. of Tunnel shaft as per rule

Dia. of Crank shaft journals as per rule

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

collars Dia. of screw

Pitch of Screw

No. of Blades

State whether moveable

Total surface

Separate No. of Feed pumps Two

Diameter of ditto 8 x 6" Stroke 12"

Can one be overhauled while the other is at work

Yes

Separate No. of Bilge pumps one

Diameter of ditto 5 x 5" Stroke 6"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines one

Sizes of Pumps 6 x 6 x 6" (General Service)

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

In Engine Room 2 @ 2"

In Holds, &amp;c. Fore Peak 1 @ 2" Chamber lockers &amp;c. 1 @ 2"

Forward Saloon 1 @ 2" after Saloon 1 @ 2" after Peak 1 @ 2"

No. of Bilge Injections 1 sizes 5 1/2"

Connected to condenser, or to circulating pump C.P.

Is a separate Donkey Suction fitted in Engine room &amp; size 1 1/2 @ 3"

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

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

No tunnel

Is it fitted with a watertight door

Yes

worked from

Yes

## BOILERS, &amp;c.—(Letter for record S) Manufacturers of Steel

Total Heating Surface of Boilers 2200

Is Forced Draft fitted

Yes

No. and Description of Boilers Two single ended multitubular

Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs

Date of test 7-12-22

No. of Certificate 16156

Can each boiler be worked separately

Yes

Area of fire grate in each boiler 30 sq ft

No. and Description of Safety Valves to

each boiler Two spring loaded

Area of each valve 4.43 sq in

Pressure to which they are adjusted 185 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers

on woodwork 23"

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

Thickness of plates

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber

plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

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

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



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:— 1 set each of top & bottom end & coupling bolts & nuts, 1 set main bearing studs & nuts, 1 pair top end braces, 1 pair bottom end braces, 2 cast iron propellers, 1 screw shaft, 1 air pump bucket rod, 1 circulating pump impeller & shaft, 2 valve spindles, 6 cylinder cover studs & nuts, 6 junk ring bolts & nuts, 1 set each of piston & rings for H.P., I.P. & L.P. 36 condenser tubes, 30 plain boiler tubes, spare parts for donkey pumps & fan engine, assorted bar iron, nuts & bolts. Two main check valves & two donkey check valves ✓

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building	During progress of work in shops - - - 1922	Nov 15. 23. DEC. 14. 20. 24. 1923	JAN 9. 14. 24. 31. FEB. 4. 12. 20. 22.		
	During erection on board vessel - - -				
	Total No. of visits	13.	Is the approved plan of main boiler forwarded herewith ✓		
			" " " donkey " " " ✓		
Dates of Examination of principal parts—	Cylinders ✓	Slides ✓	Covers ✓	Pistons ✓	Rods ✓
Connecting rods ✓	Crank shaft ✓	Thrust shaft ✓	Tunnel shafts ✓	Screw shaft ✓	Propeller ✓
Stern tube ✓	Steam pipes tested Glasgow 27/12/22.	Engine and boiler seatings 14-12-22.	Engines holding down bolts 31-1-23		
Completion of pumping arrangements 12-2-23	Boilers fixed 31-1-23	Engines tried under steam 20-2-23			
Completion of fitting sea connections 20-12-22	Stern tube 20-12-22	Screw shaft and propeller 20-12-22			
Main boiler safety valves adjusted 20-2-23	Thickness of adjusting washers	FORWARD BLR. F.V. 7/16" A.V. 11/32" AFTER BLR. F.V. 3/8" A.V. 1/2"			
Material of Crank shaft ✓	Identification Mark on Do. ✓	Material of Thrust shaft ✓	Identification Mark on Do. ✓		
Material of Tunnel shafts ✓	Identification Marks on Do. ✓	Material of Screw shafts ✓	Identification Marks on Do. ✓		
Material of Steam Pipes Lap welded wrought iron ✓		Test pressure 540 lbs ✓			
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 No ✓		If so, state name of vessel ✓			

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

The Engines & Boilers of this vessel have been fitted on board in an efficient manner, tried under working conditions and found satisfactory and are eligible in my opinion to be classed with record of L.M.C. 2-23, and the notation "Fitted for oil fuel 2-23. F.P. above 150°F."

The approved pumping arrangement plans (2) & the Oil Fuel Burning arrangement plan are forwarded herewith

The Glasgow Reports nos 42453 & 42369 on the Engines & Boilers are forwarded herewith

It is submitted that this vessel is eligible for

THE RECORD. + L.M.C. 2.23. F.D. CL.

Fitted for oil fuel 2.23. F.P. above 150°F.

The amount of Entry Fee ... £	:	:	When applied for.
Special ... £	6	10	26/2/1923
Donkey Boiler Fee ... £	:	:	When received.
Travelling Expenses (if any) £	4	15	13/4/23

Committee's Minute

Assigned

L.M.C. 2.23  
F.D. CL.

Fitted for oil fuel 2.23  
F.P. above 150°F.

Engineer Surveyor to Lloyd's Register of Shipping.



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