

## REPORT ON MACHINERY

No. 80932.

Received at London Office

WED. JUL. 7 1920

Date of writing Report

19

When handed in at Local Office

5 JUL 1920 Port of

Survey held at

Northwich

Date, First Survey July 8<sup>th</sup> 1919 Last Survey July 2<sup>nd</sup> 1920

Log. Book.

on the Barge 'D. W. Williams'

(Number of Visits 17)

Gross 177  
Net 100

Master J. Bennett

Built at Northwich

By whom built W. J. Garwood &amp; Sons

When built 1920

Engines made at

Northwich

By whom made

J. S.

when made 1920

Milers made at

Stockton

By whom made

Messrs Riley Bros.

when made 1920

Registered Horse Power

✓

Owners

Anchor, Brocklebank Line.

Port belonging to Liverpool

Horse Power as per Section 28, 33

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

GINES, &amp;c.—Description of Engines

Vert. Compound

No. of Cylinders

2

No. of Cranks

2

No. of Cylinders

12 7 2 6

Length of Stroke

18"

Revs. per minute

150

Dia. of Screw shaft

as per rule 5.79 5.9/16  
as fitted 5.9/16

Material of

M.S.

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

no liners

Is the after end of the liner made water tight

the propeller boss

✓

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

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

Length of stern bush

1-10 1/2

Dia. of Tunnel shaft

as per rule 5.92 5.04

Dia. of Crank shaft journals

as per rule 5.9/16 5.29"

Dia. of Crank pin

5.9/16

Size of Crank webs

8 1/2 x 3 1/4

Dia. of thrust shaft under

Milers

5.9/16

Dia. of screw

6-6

Pitch of Screw

8-6

No. of Blades

4

State whether moveable

no

Total surface

140'

No. of Feed pumps

1

Diameter of ditto

2"

Stroke

8"

Can one be overhauled while the other is at work

✓

No. of Bilge pumps

1

Diameter of ditto

2"

Stroke

8"

Can one be overhauled while the other is at work

✓

No. of Donkey Engines

one

Sizes of Pumps

5 1/2 + 3 1/2 x 6

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

Engine Room

one 2"

In Holds, &amp;c. two 2" in fore hold

No. of Bilge Injections

1

sizes

2"

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room &amp; size

yes 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 &amp; Cocks

yes

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

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

✓

MILERS, &amp;c.—(Letter for record

(S.)

Manufacturers of Steel

Total Heating Surface of Boilers

615 #

Is Forced Draft fitted

no

No. and Description of Boilers

I. S. B.

Working Pressure

130 lb

Tested by hydraulic pressure to

Date of test

No. of Certificate

6066

Can each boiler be worked separately

✓

Area of fire grate in each boiler

27 #

No. and Description of Safety Valves to

On each boiler

2, spring loaded

Area of each valve

3.98 #

Pressure to which they are adjusted

130 lb

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers on woodwork

9"

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

g. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Percentages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

No. of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

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

013750-013759-0135

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IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— 2 top end, 2 bottom end, 2 main bearing bolts, 1 set coupling bolts, 2 feed valve pump valves, set piston springs, assorted bolts & nuts & rivets.

The foregoing is a correct description,

For W. J. YARWOOD & SONS, LTD.

Albert Yarwood Manufacturer.

Dates of Survey while building { During progress of work in shops - - July 3.22. Sept 7. Oct 10. Nov 3. 21. Dec 11 1919  
During erection on board vessel - - - Jan 7. Feb 4. 27. Mar 17. Apr 9. 23. May 13. 26. June 11. July 2. 1920  
Total No. of visits 17.

Is the approved plan of main boiler forwarded herewith ☒

" " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders 17.3.20 Slides 17.3.20 Covers 17.3.20 Pistons 17.3.20 Rods 17.3.20

Connecting rods 17.3.20 Crank shaft 9.4.20 Thrust shaft 13.5.20 Tunnel shafts ☒ Screw shaft 21.11.19 Propeller 21.11.19

Stern tube 3.11.19 Steam pipes tested ☒ Engine and boiler seatings 21.11.19 Engines holding down bolts 13.5.20

Completion of pumping arrangements Boilers fixed 7.1.20 Engines tried under steam 11.6.20

Completion of fitting sea connections 21.11.19 Stern tube 3.11.19 Screw shaft and propeller 21.11.19

Main boiler safety valves adjusted 11.6.20 Thickness of adjusting washers 1/4" P.S.

Material of Crank shaft M.S. Identification Mark on Do. 1451 Material of Thrust shaft M.S. Identification Mark on Do. 145

Material of Tunnel shafts ☒ Identification Marks on Do. ☒ Material of Screw shafts M.S. Identification Marks on Do. 145

Material of Steam Pipes S.D. Copper Test pressure

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 machinery of this Vessel has been built under Special Survey. The workmanship materials are good. Engines & boiler now fitted on board in an efficient manner, and tried under steam, and are now eligible for record of + L.M.C. 7.20

It is submitted that this vessel is eligible for THE RECORD + LMC 7. 20. 130th.

J.W.D. 16/7/20 J.W.R.

L. G. G. G. G.

Engineer Surveyor to Lloyd's Register of Shipping

The amount of Entry Fee ... £ 1 : 0 : 0 When applied for, - 6 JUL 1920  
Balance of Special ... £ 5 : 18 : 0  
Donkey Boiler Fee ... £ : : : When received, 24/8/19. 20/6/25  
Travelling Expenses (if any) £ 6 : 16 : 0

Committee's Minute

Assigned

LIVERPOOL - 6 JUL 1920

L.M.C. 7. 20

WATKINS & SONS  
WATKINS



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