

REPORT ON MACHINERY.

No. 6794.

THUR. 16 JUN 1910

Port of

Belfast

Received at London Office.

19

No. in Survey held at

Belfast

Date, first Survey 15th Oct 1909 Last Survey June 8th 1910

Book.

on the

S.S. "Mauritai"

(Number of Visits 43)

ster

Built at

Belfast

By whom built

Warkman Clark & Co.

Tons

Gross 7279

Net 4645

When built

1910

ines made at

Belfast

By whom made

"

- when made

1910

lers made at

By whom made

when made

istered Horse Power

Owners

Lycer Line L^d

Port belonging to

London

n. Horse Power as per Section 28

727

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

GINES, &c.—Description of Engines

Twin Screw Triple Expansion

No. of Cranks 6

u. of Cylinders

22" 3" 4" 6" 2"

Length of Stroke

45"

Revs. per minute

78

Dia. of Screw shaft

as per rule 13.2"

as fitted 13.5"

Material of screw shaft

S. Steel

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

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

Yes

If two

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

Yes

Length of stern bush

4' 10"

a. of Tunnel shaft

as per rule 11.9"

as fitted 12.12"

Dia. of Crank shaft journals

as per rule 12.4"

as fitted 12.75"

Dia. of Crank pin

12 1/4"

Size of Crank webs

23x8 1/2"

Dia. of thrust shaft under

lars

12 1/4"

Dia. of screw

16' 0"

Pitch of Screw

18' 3"

No. of Blades

3

State whether moveable

Yes

Total surface

70 sq ft.

o. of Feed pumps

2

Diameter of ditto

4"

Stroke

24"

Can one be overhauled while the other is at work

Yes

o. of Bilge pumps

1

Diameter of ditto

5 1/2"

Stroke

24"

Can one be overhauled while the other is at work

Yes

o. of Donkey Engines

5

Sizes of Pump

1 Ballast 10 x 11 x 10

1 General 8 x 5 1/2 x 8

2 Mains 12 x 9 x 26

1 Sanitary 5 1/4 x 4 x 6

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

10-3 1/2" x 1-2 1/2"

Engine Room

4-3 1/2"

o. of Bilge Injections

2 sizes

4 1/2"

Connected to condenser, or to circulating pump

Pump

Is a separate Donkey Suction fitted in Engine room & size

Yes-3 1/2"

re 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

re all connections with the sea direct on the skin of the ship

Yes

Are they Valves or Cocks

Both

re 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

re 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

That pipes are carried through the bunkers

True

How are they protected

Wood Casings

re all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

re 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

15/5/10

of Stern Tube

15/5/10

Screw shaft and Propeller

19/4/10

Is the Screw Shaft Tunnel watertight

Stated

Is it fitted with a watertight door

Yes

worked from

Top of the frame

T. Room

OILERS, &c.—(Letter for record S)

Manufacturers of Steel

Warkman Clark & Co.

Total Heating Surface of Boilers

10396 sq ft

Is forced Draft fitted

Yes

No. and Description of Boilers

4-Single End Cylind^r

Working Pressure

200 lbs

Tested by hydraulic pressure to

400 lbs

Date of test

8-4-10

No. of Certificate

431

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

55 sq ft

No. and Description of Safety Valves to

each boiler

Two-Wicket Spring

Area of each valve

11.04 sq in

Pressure to which they are adjusted

205 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

18 in

Mean dia. of boilers

15' 6"

Length

12' 0"

Material of shell plates

Steel

Thickness

1 1/2"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Lap. D & Y

Long. seams

Butt

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

10"

Top of plates on width of butt straps

22 1/2"

Per centages of strength of longitudinal joint

rivets 93.0

plate 84.1

Working pressure of shell by rules

233 lbs

Size of manhole in shell

16 x 12"

Size of compensating ring

M^c Neil

No. and Description of Furnaces in each boiler

4-Weightless

Material

Steel

Outside diameter

43 1/2"

Length of plain part

top 0"

Thickness of plates

crown 3 3/4"

bottom 3 1/4"

Description of longitudinal joint

Weld

No. of strengthening rings

0

Working pressure of furnace by the rules

225 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

8 1/4" x 8 1/4"

Back

Various

Top

8 1/4" x 8 1/4"

If stays are fitted with nuts or riveted heads

Nuts inside

Working pressure by rules

208 lbs

Material of stays

Steel

Diameter at smallest part

1 1/2"

Area supported by each stay

68 sq in

Working pressure by rules

232 lbs

End plates in steam space:

Material

Steel

Material

Steel

Thickness

1 1/2"

Pitch of stay

23 1/4" x 2 1/4"

How are stays secured

Nuts & washers

Working pressure by rules

200 lbs

Material of stays

Steel

Diameter at smallest part

2 1/2"

Area supported by each stay

41 3/8"

Working pressure by rule

227 lbs

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

Steel

Thickness

1/2"

Greatest pitch of stays

13 1/2"

Working pressure of plate by rules

217 lbs

Diameter of tubes

2 1/2"

Pitch of tubes

3 3/4" x 3 5/8"

Material of tube plates

Steel

Thickness: Front

3/4"

Back

1/2"

Mean pitch of stays

1 1/2" x 7 1/4"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

210 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

9 1/2" x (3/4" x 2)

Length as per rule

34 1/2"

Distance apart

8 1/4"

Working pressure by rules

209

Superheater or Steam chest; how connected to boiler

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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

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
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with easing 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 Plates
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	
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	Stayed by			
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:—

Butt bellows shaft & 2 blades; 2 air crank pin bushes; 2 air piston rods bushes; air pump bucket & rod; 2 slide valves & spindles; 2 air piston packing rings; 2 air pump rod & bucket & 1 air piston rod; 2 screw two rods. Half pen to Lloyd's Rules extra.

The foregoing is a correct description,
FOR WORKMAN, CLARK & CO., LIMITED

Manufacturer.

Dates of Survey while building	During progress of work in shops—	1909, Oct 15.	Nov 2. 10. 20.	Dec 4. 10. 14. 22.	1910, Jan 7. 12. 17
	During erection on board vessel—	and up to June 8 th			
Total No. of visits		43			

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders	7/8/10	Slides	Covers	5	Pistons	Rods
Connecting rods	4/4/10	Crank shaft	30/4/04	Thrust shaft	Tunnel shafts	8
Stern tube	8/5/10	Steam pipes tested	9/5/10	Engine and boiler seatings	13/5/10	Engines holding down bolts
Completion of pumping arrangements	24/5/10	Boilers fixed	13/5/10	Engines tried under steam	19/5/10	
Main boiler safety valves adjusted	19/5/10	Thickness of adjusting washers	18-16			
Material of Crank shaft	W. Iron	Identification Mark on Do.	44098	Material of Thrust shaft	W. Iron	Identification Mark on Do.
Material of Tunnel shafts	W. Iron	Identification Marks on Do.	44098	Material of Screw shafts	W. Iron	Identification Marks on Do.
Material of Steam Pipes	W. Iron	Test pressure	600 lbs sq. in.			

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

The machinery of this vessel has been constructed under Special Survey, and in accordance with the Rules. The workmanship and the materials are of good description, and an trial in Belfast Lough, the machinery worked satisfactorily.

In my opinion, it is eligible for record + L M C 6-10, and notation "Fixed Draft Electric Light and Refrigerating Machine"

It is submitted that
this vessel is eligible for
THE RECORD. + L M C 6.10

F.D. Ref mch.

APR 17.6.10
HED

The amount of Entry Fee..	£ 3 : -	When applied for,
Special	£ 56 : 7	13-6-10
Donkey Boiler Fee .. .	£ :	When received,
Travelling Expenses (if any) £	:	16.6.10

Committee's Minute

Assigned

FRI. 17 JUN 1910

+ L M C 6.6.10

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



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Foundation