

## REPORT ON MACHINERY.

No. 215

THUR. 2 APR 1908

Date of writing Report MARCH 18<sup>TH</sup> 1908

Received at London Office

When handed in at Local Office

MARCH 19<sup>TH</sup> 1908

Port of

SEATTLE, WASHINGTON, U.S.A.

No. in Survey held at

SEATTLE, WASH., U.S.A.

Date, First Survey

JULY 3<sup>RD</sup> 1907

Last Survey

MARCH 9<sup>TH</sup> 1908

Reg. Book.

99 on the

Stir Chicago.

(Number of Visits DAILY)

DATE

Gross 419.33

Net 129.56

When built 1908.

Master H. B. JOYCE

Built at

Seattle, Wash.

By whom built

The Moran Company.

Engines made at

Seattle, Wash.

By whom made

The Moran Company.

Boilers made at

"

"

By whom made

"

"

when made

1908.

Registered Horse Power

650

Owners

A. Booth &amp; Co.

when made

1908.

Nom. Horse Power as per Section 28

112

Is Refrigerating Machinery fitted for cargo purposes

No.

Port belonging to

SEATTLE

Is Electric Light fitted

Yes.

ENGINES, &amp;c.—Description of Engines

Vertical triple expansion.

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

15"-24"-38"

Length of Stroke

24"

Revs. per minute

140

Dia. of Screw shaft

8.012"

Material of

Wrot Steel.

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

No.

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

Liner fits tight.

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

Continuous liner.

Dia. of Tunnel shaft

7.1"

as per rule

7.34"

Dia. of Crank shaft journals

as per rule

7.458"

Dia. of Crank pin

8"

Size of Crank webs

H.P.-5"x15 1/2"

I.P.-5 1/2"x15 1/2"

Dia. of thrust shaft under

collars

8"

Dia. of screw

9'-10"

Pitch of Screw

9'-9"

No. of Blades

4

State whether moveable

No.

Total surface

32.4 sq. ft.

No. of Feed pumps

1-Donkey.

Diameter of ditto

Donkey 4"

Stroke

Donkey 6"

Can one be overhauled while the other is at work

Yes.

(Independent pumps.)

No. of Bilge pumps

1-Donkey.

Diameter of ditto

Donkey 4"

Stroke

Donkey 6"

Can one be overhauled while the other is at work

Yes.

"

No. of Donkey Engines

1

Sizes of Pumps

Main 4"

Main 8"

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

In Engine Room

1-4" to F. &amp; B. pump.

1-3" to Donkey pump.

In Engine Room

1-4" to F. &amp; B. pump.

1-3" to Donkey pump.

Ford stores.

All connected with both F. &amp; B. and Donkey pumps.

In Holds, &amp;c.

1-3" to Fireroom bilge.

1-2" to Fish hold.

1-2" to

No. of Bilge Injections

1

sizes

5"

Connected to condenser, or to circulating pump

Circ. pump.

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

Yes - 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

Sea chests fitted

Are they Valves or Cocks

Valves.

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

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.

Dates of examination of completion of fitting of Sea Connections

Nov. 16<sup>TH</sup> /07

of Stern Tube

Nov. 16<sup>TH</sup> /07

Screw shaft and Propeller

Nov. 16<sup>TH</sup> /07

Is the Screw Shaft Tunnel watertight

No TUNNEL

Is it fitted with a watertight door

worked from

Shell and drum head plates by Worth Bros. Co.

Manufacturers of Steel

All others by Central Iron &amp; Steel Co.

BOILERS, &amp;c.—(Letter for record

MARCH 9<sup>TH</sup> /07

E

Total Heating Surface of Boilers

2200 sq. ft.

Is Forced Draft fitted

No.

No. and Description of Boilers

One single ended Scotch.

Working Pressure

180 lbs.

Tested by hydraulic pressure to

360 LBS

Date of test

JAN. 17<sup>TH</sup> /08

No. of Certificate

6

Can each boiler be worked separately

2-4 Improved

Area of fire grate in each boiler

72 sq. ft.

No. and Description of Safety Valves to

each boiler

spring loaded.

Area of each valve

12.56"

Pressure to which they are adjusted

180 lbs.

Are they fitted with easing gear

Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork

20"

Mean dia. of boilers

14'-0"

Length

11'-4 1/2"

Material of shell plates

Steel.

Thickness

1/2"

Range of tensile strength

86%

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Double.

13 1/2" outside.

22 1/2" inside.

long. seams

butt strap.

Diameter of rivet holes in long. seams

1/16"

Pitch of rivets

9 3/8"

outer row. Lap of plates or width of butt straps

22 1/2"

Working pressure of shell by rules

184 lbs

Size of manhole in shell

11"x15"

Per centages of strength of longitudinal joint

86%

Working pressure of shell by rules

184 lbs

Size of manhole in shell

11"x15"

No. and Description of Furnaces in each boiler

3

Morison Corrugated

Material

Steel.

Outside diameter

48 3/8"

Length of plain part

top

Thickness of plates

9/16"

Description of longitudinal joint

bottom

No. of strengthening rings

5/8"

Back

5/8"

Top

5/8"

Bottom

5/8"

Working pressure of furnace by the rules

183 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

5/8"

Back

5/8"

Top

5/8"

Bottom

5/8"

Working pressure by rules

244 lbs

Pitch of stays to ditto: Sides

6 1/2"x6 1/2"

Back

6 1/2"x6 1/2"

Top

6 1/2"x7 1/8"

If stays are fitted with nuts or riveted heads

Nuts where possible.

Working pressure by rules

267 lbs.

Material of stays

Steel.

Diameter at smallest part

1-23"

Area supported by each stay

39 sq. in.

Working pressure by rules

244 lbs

End plates in steam space:

Nuts inside.

Working pressure by rules

240 lbs.

Material of stays

Steel.

Diameter at smallest part

2 5/8"

Area supported by each stay

236 sq. in.

Working pressure by rules

238 lbs.

Material of Front plates at bottom

Steel.

Thickness

3/4"

Greatest pitch of stays

6 1/2"

Working pressure of plate by rules

345 lbs.

Diameter of tubes

30.0"

Pitch of tubes

48"

Material of tube plates

Steel.

Thickness: Front

3/4"

Back

3/4"

Mean pitch of stays

8.2"

Pitch across wide water spaces

13 3/4"

Working pressures by rules

244 LBS

Girders to Chamber tops: Material

Steel.

Depth and

thickness of girder at centre

9"x1 1/4"

Length as per rule

33 1/2"



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 Safety \_\_\_\_\_  
 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:— 1 pair crank brasses, 1 pair crosshd brasses, 1 set link blocks, 14 condenser tubes, 50 condenser ferrules, 6 boiler tubes, 6 follower bolts, & 6 studs and nuts for cylinder covers. 2 TOP END BOLTS AND 2 BOTT. END BOLTS FOR CONNECTING ROD, 2 MAIN BEARING BOLTS, 1 SET COUPLING BOLTS, 1 SET OF FEED AND BILGE PUMP VALVES

The foregoing is a correct description, ✓

*Chetop Company*  
*W. H. H. H. H.*

Manufacturer.

Dates of Survey while building { During progress of work in shops - - FROM JULY TO NOVEMBER 1907  
 { During erection on board vessel - - FROM OCTOBER 1907 TO MARCH 1908  
 Total No. of visits DAILY Is the approved plan of main boiler forwarded herewith \_\_\_\_\_

" " " donkey " " " NONE  
 Dates of Examination of principal parts—Cylinders OCT. /07 Slides OCT. /07 Covers OCT. /07 Pistons OCT. /07 Rods OCT. /07  
 Connecting rods NOV. /07 Crank shaft SEPT. /07 Thrust shaft SEPT. /07 Tunnel shafts OCT. /07 Screw shaft NOV. /07 Propeller NOV. /07  
 Stern tube NOV. /07 Steam pipes tested JAN. 9TH /08 Engine and boiler seatings DEC. /07 Engines holding down bolts DEC. /07, JAN. /08  
 Completion of pumping arrangements JANUARY /08 Boilers fixed JANUARY /08 Engines tried under steam FEB. 12TH & 22ND /08  
 Main boiler safety valves adjusted FEB. 7TH /08 Thickness of adjusting washers ADJUSTED BY JAM NUTS LLOYD'S R.H. 438, 446  
 Material of Crank shaft WROT STEEL Identification Mark on Do. 444, 448 Material of Thrust shaft WROT STEEL Identification Mark on Do. 437  
 SHAFTING MADE BY BETHLEHEM STEEL CO, SOUTH BETHLEHEM, PA, LLOYD'S R.H. LLOYD'S R.H.  
 Material of Tunnel shafts WROT STEEL Identification Marks on Do. 447 Material of Screw shafts WROT STEEL Identification Marks on Do. 442  
 LOOSE COUPLING, WROT STEEL, LLOYD'S R.H. 438, 445  
 Material of Steam Pipes COPPER Test pressure 360 LBS □

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

The materials for chafting and boiler were tested by a Surveyor to the Society. The Engines and boiler built and installed under my daily inspection. Plan of boiler approved by the Committee. The materials and workmanship on the Engines and boiler, and details in connection therewith, are first class and the Society's rules complied with in every detail.

In my opinion the vessel is eligible to be classed in the Society and to have record of + LMC 3.08 in the Register Book

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 3.08.

ELEC LIGHT.

*28.4.08.*  
*28.4.08.*

The amount of Entry Fee .. £ 2 : - : When applied for, \_\_\_\_\_  
 Special .. £ 30 : - : March 19...1925  
 Donkey Boiler Fee .. £ : : When received, \_\_\_\_\_  
 Travelling Expenses (if any) £ 8 : - : ✓ 19....

*James Fowler*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FM. 1 MAY 1908

Assigned

+ LMC 3.08

MACHINERY CERTIFICATE WRITTEN



© 2020

Lloyd's Register Foundation

Certificate (if required) to be sent to THE MORAN CO., SEATTLE, WASH.

(The Surveyors are requested not to write on or below the space for Committee's Minute.)