

REPORT ON MACHINERY.

No. 54

Port of Cleveland, Ohio

SAT. 18 DEC. 1915

Received at London Office

19

No. in Survey held at DetroitDate, first Survey 13th JulyLast Survey 23rd Dec 1915

Reg. Book.

on the

S.S. "Yague"

(Number of Visits)

Master

Built at DetroitBy whom built Great Lakes Eng. Works

Tons

Gross 1414Net 948When built 1915

Engines made at

Detroit

By whom made

Great Lakes Eng. Workswhen made 1915

Boilers made at

Cottain

By whom made

American S. B. Cowhen made 1915

Registered Horse Power

900

Owners

Clyde Steam Ship Co

Port belonging to

New York

Nom. Horse Power as per Section 28

200

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

17" 28 1/2" 48"

Length of Stroke

36"

Revs. per minute

90

Dia. of Screw shaft

as per rule 10 1/2"

Material of

steel

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

no

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

yes

If two

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

yes

Length of stern bush

4" 1"

Dia. of Tunnel shaft

as per rule 9 1/2"

Dia. of Crank shaft journals

as per rule 9 1/2"

Dia. of Crank pin

as per rule 9 1/2"

Size of Crank webs

19 1/2" x 7"

Dia. of thrust shaft under

collars

9 1/4"

Dia. of screw

11" 10"

Pitch of Screw

12" 3"

No. of Blades

4

State whether moveable

no

Total surface

55 sq ft

No. of Feed pumps

2

Diameter of ditto

10" 6"

Stroke

12"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2"

Stroke

18"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

Sizes of Pumps

1/2" x 12" x 10" Duplex

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

In Engine Room

3-3" x 1 1/2" x 4" 6 1/2" x 7" x 8"

In Holds, &c.

121 hold 2-3"2-3" in galley room: 1-3" Tunnel Wellafter hold 1-3" x 2-2 1/2"

No. of Bilge Injections

1

size

6"

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes-4"

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

yes

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

yes

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

26.8.15

of Stern Tube

26.8.15

Screw shaft and Propeller

26.8.15

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

top platform

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel

Carnegie & North Bros

Total Heating Surface of Boilers

2952 sq ft

Is Forced Draft fitted

yes

No. and Description of Boilers

2 Single Ended

Working Pressure

190 lbs

Tested by hydraulic pressure to

285 lbs

Date of test

24.7.15

No. of Certificate

44

Can each boiler be worked separately

yes

Area of fire grate in each boiler

36.75 sq ft

No. and Description of Safety Valves to

each boiler

double spring loaded

Area of each valve

7.06 sq in

Pressure to which they are adjusted

190 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

12"

Mean dia. of boilers

11.6"

Length

11.0"

Material of shell plates

steel

Thickness

1 5/16"

Range of tensile strength

28320 lbs

Are the shell plates welded or flanged

no

Descrip. of riveting: air. seams

S. Riv.

Long. seams

T.R.D.B.S.

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

8"

Lap of plates or width of butt straps

17 1/2" & 11 1/2"

Percentages of strength of longitudinal joint

87.5% rivets 86.5% plates

Working pressure of shell by rules

202

Size of manhole in shell

11" x 15"

Size of compensating ring

2' 9" x 2' 9"

No. and Description of Furnaces in each boiler

2 cutting

Material

steel

Outside diameter

3' 10 1/2"

Length of plain part

top 9" bottom 7"

Thickness of plates

top 9" bottom 7"

Description of longitudinal joint

weld

No. of strengthening rings

yes

Working pressure of furnace by the rules

191

Combustion chamber plates: Material

steel

Thickness: Sides

5/8"

Back

5/8"

Top

5/8"

Pitch of stays to ditto: Sides

7 1/4" x 7 1/4"

Back

7 1/4" x 7 1/4"

Top

7" x 8 1/8"

If stays are fitted with nuts or riveted heads

yes R. H.

Working pressure by rules

190

Material of stays

steel

Diameter at smallest part

1 1/259"

Area supported by each stay

52.6

Working pressure by rules

191

End plates in steam space:

yes

Material

steel

Thickness

1 5/16"

Pitch of stays

6 1/4" x 6 1/4"

How are stays secured

D. Nuts

Working pressure by rules

197

Material of Front plates at bottom

steel

Thickness

3/4"

Material of Lower back plate

steel

Thickness

5/8"

Greatest pitch of stays

7 1/4" x 7 1/4"

Working pressure of plate by rules

190

Diameter of tubes

2 1/2"

Pitch of tubes

3 5/8" x 3 5/8"

Material of tube plates

steel

Thickness: Front

3/4" x 1/2"

Pitch across wide water spaces

15 1/8"

Working pressures by rules

208

Girders to Chamber tops: Material

steel

Depth and

yes

Thickness of girder at centre

8 1/4" x 30 1/2"

Length as per rule

27 1/2"

Distance apart

8 1/8"

Number and pitch of stays in each

3 @ 7"

Working pressure by rules

236

Superheater or Steam chest; how connected to boiler

yes

Can the superheater be shut off and the boiler worked

yes

separately

yes

Diameter

yes

Length

yes

Thickness of shell plates

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:— 2 connecting rod tip end bolts & nuts: 2 connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: 1 set of bridge pump valves: 1 set of eccentric straps: 1 pair of bottom end brasses: 1 pair of crank end brasses: a quantity of assorted bolts & nuts: iron of various sizes.

The foregoing is a correct description.

Manufacturer.

Garland Engineering Works by H. W. Hayt Selig

Dates of Survey while building

During progress of work in shops—	Apr. 15. 16. 21. 24. 28. Aug. 2. 5. 13. 25. 26.
During erection on board vessel	Sept. 8. 13. 20. 21. Oct. 13. 21. 22. 23.
Total No. of visits	18

Is the approved plan of main boiler forwarded herewith ☒ Yes

donkey ☒ none

Dates of Examination of principal parts—Cylinders 25.8.15 Slides 5.8.15 Covers 5.8.15 Pistons 5.8.15 Rods 25.8.15

Connecting rods 25.8.15 Crank shaft 25.8.15 Thrust shaft 13.9.15 Tunnel shafts 22.7.15 Screw shaft 3.8.15 Propeller 3.8.15

Stern tube 5.8.15 Steam pipes tested 18.10.15 Engine and boiler seatings 26.8.15 Engines holding down bolts 20.9.15

Completion of pumping arrangements 22.10.15 Boilers fixed 20.9.15 Engines tried under steam 23.10.15

Main boiler safety valves adjusted 23.10.15 Thickness of adjusting washers *jam nuts fitted & no washers*

Material of Crank shaft *steel* Identification Mark on Do. 147 Material of Thrust shaft *steel* Identification Mark on Do. 147

Material of Tunnel shafts *steel* Identification Marks on Do. 267 Material of Screw shafts *steel* Identification Marks on Do. 267

Material of Steam Pipes *steel* Test pressure 380 lbs per sq. in.

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

The machinery of this vessel has been built under special survey: the material & workmanship being good, and securely fitted aboard.

The machinery was tried under steam & found satisfactory.

It is submitted that this vessel is eligible for a record of + L.M.C. 10.15 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 10.15

AWD

21/12/15

The amount of Entry Fee.. \$ 10.00.

Special .. \$ 150.00.

Donkey Boiler Fee .. £

Travelling Expenses (if any) \$ 54.00.

When applied for.

20/12/15

When received.

21/12/15

A. T. Thomas & Jean Edwards.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUE. 21 DEC. 1915

Assigned

+ L.M.C. 10.15



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