

REPORT ON MACHINERY.

Port of Cleveland, Ohio

Received at London Office SAT. 18 DEC. 1915

No. in Survey held at Detroit

Date, first Survey 13th July

Last Survey 23rd Oct 1915

Reg. Book. on the S.S. "Yaque"

(Number of Visits)

Master ✓ Built at Detroit

By whom built Great Lakes Eng. Works 1st 147

Tons } Gross 1414
Net 948
When built 1915

Engines made at Detroit

By whom made Great Lakes Eng. Works

when made 1915

Boilers made at Cottain

By whom made American S. B. Co

when 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 screw shaft 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 ✓

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 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 9 1/2"

Size of Crank webs 19 1/2" x 7"

Dia. of thrust shaft under

collars 9 1/2"

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 x 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 4 1/2" x 4 1/2" x 10"

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

In Engine Room 3 - 3" x 1 1/2" & 4 1/2" x 7" x 8"

In Holds, &c. 121 hold 2 - 3"

2 - 3" in galley room: 1 - 3" Tunnel Well

apart hold 1 - 3" & 2 - 2 1/2"

No. of Bilge Injections 1

sizes 6"

Connected to condenser, or to circulating pump no

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 ✓

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

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

OILERS, &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 locked

Area of each valve 7.06

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 28332 lbs

Are the shell plates welded or flanged no

Descrip. of riveting: circ. 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

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"

Thickness of plates bottom 9"

Description of longitudinal joint weld

No. of strengthening rings ✓

Working pressure of furnace by the rules 191

Combustion chamber plates: Material steel

Thickness: Sides 5/8"

Back 5/8"

Top 5/8"

Bottom 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 ✓ R. H.

Working pressure by rules 190

Material of stays steel

Diameter at smallest part 1.259

Area supported by each stay 52.6

Working pressure by rules 191

End plates in steam space:

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 stays steel

Diameter at smallest part 5.94

Area supported by each stay 26.4

Working pressure by rules 234

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"

Back 5/8"

Mean pitch of stays 7 1/4"

Pitch across wide water spaces 15 1/8"

Working pressures by rules 208

Girders to Chamber tops: Material steel

Depth and

Thickness of girder at centre 8 1/4" x 7 3/4"

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

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivets

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

Stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

0600-90111

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 top 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. Hoyle Seely*

Dates of Survey while building	During progress of work in shops—	July 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 party, 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 + LMC 10.15
J.W.D. 21/12/15

The amount of Entry Fee.. \$ 10.00. When applied for.
 Special .. \$ 150.00. 20 Nov 1915
 Donkey Boiler Fee .. £
 Travelling Expenses (if any) \$ 54.00. *Jany. 1916*

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

Committee's Minute TUE. 21. DEC. 1915
 Assigned + LMC 10.15

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

