

REPORT ON MACHINERY.

Port of

PHILADELPHIA.

Received at London Office MON. JAN. 13. 1913.

No. in Survey held at
Reg. Book.

PHILADELPHIA.

Date, first Survey Jan 19-1912 Last Survey Dec 14 1912

(Number of Visits 52)

Supp 29 on the s.s. Gulfoil

Gross 5188.69

Master H. Kort

Built at Camden N.J. By whom built New York Shipbuilding Co.

Net 3202.00

Engines made at Camden N.J.

By whom made New York Shipbuilding Co.

When built 1912-12

Boilers made at - do -

By whom made - do -

when made 12-1912-12

Registered Horse Power 543

Owners Gulf Refining Co.

Port belonging to Port Arthur, Tex.

Nom. Horse Power as per Section 28 543

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 27 4/8 - 75

Length of Stroke 48

Revs. per minute 70

Dia. of Screw shaft

as per rule 15 1/2

Material of 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 soldered 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 fitted close If two

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

Length of stern bush 5-9

Dia. of Tunnel shaft as per rule

Dia. of Crank shaft journals as per rule 14-35

Dia. of Crank pin 15

Size of Crank webs 24-11 Dia. of thrust shaft under

collars 14 3/4

Dia. of screw 18-0

Pitch of Screw 18-3

No. of Blades 4

State whether moveable yes

Total surface 74 sq ft

No. of Feed pumps 2

Diameter of ditto 12-8 1/2

Stroke 18

Can one be overhauled while the other is at work yes

No. of Bilge pumps 2

Diameter of ditto 4 1/2

Stroke 22

Can one be overhauled while the other is at work yes

No. of Donkey Engines 4

Sizes of Pumps 2x10x12, 12x14x12, (2) 5 1/2 x 16 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 5-3 1/2

In Holds, &c. After pump room 2-3 1/2, fore pump

No. of Bilge Injections 1

sizes 10

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 23-8-12 of Stern Tube 23-8-12 Screw shaft and Propeller 23-8-12

Is the Screw Shaft Tunnel watertight no tunnel Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record 7)

Manufacturers of Steel North Bros. Louisville

Total Heating Surface of Boilers 7843 sq ft Is Forced Draft fitted yes No. and Description of Boilers 3. Single ended, mult.

Working Pressure 190 lbs Tested by hydraulic pressure to 285 lbs Date of test 31-5-12 No. of Certificate 33

Can each boiler be worked separately yes Area of fire grate in each boiler 57.75 sq ft No. and Description of Safety Valves to

each boiler 2. Relief Spring Area of each valve 8.29 sq in Pressure to which they are adjusted 190 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and coal bunkers 10, oil bunkers 7-0 Mean dia. of boilers 14-9 5/16 Length 11-2 1/4 Material of shell plates Steel

Thickness 1 5/16 Range of tensile strength 29-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams A.T.

long. seams D.B.S.T.R. Diameter of rivet holes in long. seams 1 7/16 Pitch of rivets 9 5/16 Lap of plates or width of butt straps 20 1/4

Per centages of strength of longitudinal joint rivets 84.5 Working pressure of shell by rules 199 lbs Size of manhole in shell 16 x 12

Size of compensating ring 3 1/2 x 3 1/2 x 1 5/16 No. and Description of Furnaces in each boiler 3. Morrison Material Steel Outside diameter 46 3/16

Length of plain part top 3 bottom 3 Thickness of plates crown 19 bottom 32 Description of longitudinal joint welded No. of strengthening rings yes

Working pressure of furnace by the rules 204 lbs 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 x 7 1/2 Back 7 x 7 1/2 Top 7 x 7 1/2 If stays are fitted with nuts or riveted heads nut Working pressure by rules 256 lbs

Material of stays Iron Diameter at smallest part 1.81 Area supported by each stay 52.5 sq in Working pressure by rules 258 lbs End plates in steam space:

Material Steel Thickness 1 3/8 Pitch of stays 7 x 15 1/2 How are stays secured D.N. Working pressure by rules 218 lbs Material of stays Steel

Diameter at smallest part 2 1/4 Area supported by each stay 259 sq in Working pressure by rules 234 lbs Material of Front plates at bottom Steel

Thickness 3/4 Material of Lower back plate Steel Thickness 3/4 Greatest pitch of stays 15 1/2 x 7 1/2 Working pressure of plate by rules 275 lbs

Diameter of tubes 2 1/2 Pitch of tubes 3 1/2 x 3 1/2 Material of tube plates Steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 9 3/8

Pitch across wide water spaces 1 3/2 Working pressures by rules 235 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9 x 1 3/4 Length as per rule 33 1/2 Distance apart 7 1/2 Number and pitch of stays in each 4-7

Working pressure by rules 252 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked

separately yes Diameter - Length - Thickness of shell plates - Material - Description of longitudinal joint - Diam. of rivet

holes - Pitch of rivets - Working pressure of shell by rules - Diameter of flue - Material of flue plates - Thickness -

Is 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 -

Lloyd's Register Foundation
42-0106

VERTICAL DONKEY BOILER— Manufacturers of Steel *Wash Bros Co. Covington*

No. *1* Description *Vertical multitubular*

Made at *Camden* By whom made *New York S.S.C.* When made *1912* Where fixed *Stokehold*

Working pressure *20 1/2* tested by hydraulic pressure to *180 1/2* Date of test *Sept. 9. 1912* No. of Certificate *35* Fire grate area *4 1/2* Description of Safety Valves *Direct Spring* No. of Safety Valves *1* Area of each *3 1/4* Pressure to which they are adjusted *120 1/2* Date of adjustment *12. 12. 1912*

If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *34 1/8* Length *5. 9*

Material of shell plates *Steel* Thickness *5/16* Range of tensile strength *28. 32* Descrip. of riveting long. seams *lap d. T.*

Dia. of rivet holes *11/16* Whether punched or drilled *Drill* Pitch of rivets *2. 28* Lap of plating *3 1/2* Per centage of strength of joint *70* Rivets *88* Plates *88*

Working pressure of shell by rules *25 1/2* Thickness of shell crown plates *3 1/2* Radius of do. *flat* No. of stays to do. *tube* Dia. of stays *all headed*

Diameter of furnace *Top 28 1/2 Bottom* Length of furnace *25* Thickness of furnace plates *3/2* Stayed by *tubes all headed*

Working pressure of furnace by rules *138 1/2* Thickness of furnace crown plates *3/8* Stayed by *tubes all headed*

Diameter of *uptake* tubes Thickness of uptake plates Thickness of *water* tubes *12. 8. 13. W. G.* Dates of survey *July 24. Aug 6. Sept. 10. 19. Oct. 21. Dec 12. 1912*

SPARE GEAR. State the articles supplied:— *1 Section of crank shaft. 1 tail shaft. 1 prop boss 74 blades. 1 set crosshead crank pin main bearing bushes bolts & nuts. 1 Guide shoe. 1 eccentric strap. 1 Air pump rod. 1 Impeller shaft. a full outfit of pump valves for main & auxiliary. 700 assorted bolts iron & steel. 1 coupling bolts.*

The foregoing is a correct description,
Hallagan Manufacturer.

Dates During progress of work in shops— *Jan 19. 31. Feb 6-16-26-28. Mar 14-25-28. Apr 7-8-16-23-29. May 7-13-17-22-31. Jun 7-10-14-25-27. Jul 2-10-18-24-28. Aug 2-6*

of Survey while building During erection on board vessel— *Sept 3-10-16-19-21-25-27. Oct 1-14-21-28. Nov 7-12-18-29. Dec 8-9-11-12-14 1912.*

Total No. of visits *52.* Is the approved plan of main boiler forwarded herewith *Yes*

“ “ “ donkey “ “ “ *Yes*

Dates of Examination of principal parts—Cylinders *17. 5. 12* Slides *17. 5. 12* Covers *17. 5. 12* Pistons *17. 5. 12* Rods *17. 5. 12*

Connecting rods *17. 5. 12* Crank shaft *10. 6. 12* Thrust shaft *10. 6. 12* Tunnel shafts *✓* Screw shaft *18. 7. 12* Propeller *23. 8. 12*

Stern tube *27. 8. 12* Steam pipes tested *12. 12. 12* Engine and boiler seatings *16. 9. 12* Engines holding down bolts *16. 9. 12*

Completion of pumping arrangements *29. 11. 12* Boilers fixed *19. 9. 12* Engines tried under steam *11. 12. 12*

Main boiler safety valves adjusted *12. 12. 12* Thickness of adjusting washers *Port. F. 13/16. A. 7/8. S. B. F. 7/8. A. 7/8. F. B. F. 3/8. A. 3/4*

Material of Crank shaft *Steel* Identification Mark on Do. *763* Material of Thrust shaft *Steel* Identification Mark on Do. *763*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Steel* Identification Marks on Do. *763*

Material of Steam Pipes *Solid drawn steel* Test pressure *285 1/2*

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

The machinery of this vessel has been constructed & installed under Special Survey. The workmanship is found to be good. This vessel has been fitted to burn liquid fuel in accordance with the requirements of Sect. 49 of the Rules on oil fuel. The method used is mechanical atomization. The Schute and Koerting system burners has been installed upon trial were found to work well. The donkey boiler is not fitted for liquid fuel.

The machinery of this vessel was found to work well under steam & is in my opinion eligible for the record of +LMC 12. 12, fitted for liquid fuel, in the Register Book.

The amount of Entry Fee... \$150.00 When applied for... 26. 12. 1912

Special... £206. 25

Donkey Boiler Fee... \$10. 50

Traveling Expenses (if any) \$268. 25

When received... 21. 11. 1912

Committee's Minute *FRI. JAN 17 1913*

Assigned *+ L.M.C. 12. 12*

Robert Haig
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

PHILADELPHIA. (The Surveys are requested not to write on or below the space for Committee's Minutes.)

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