

# REPORT ON MACHINERY.

No. 1209

Port of Baltimore Md.

No. in Survey held at Newport News Va.

Date, first Survey 4 June 1902 Last Survey 7 Nov 1906

Received at London Office SAT. 1 JUN 1907

g. Book. 124 on the Steel S.S. "W. S. Porter"

(Number of Visits 61)

ster Boureson Built at Newport News Va. By whom built Newport News S.S. & Dry Dock Co. When built 1906  
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ers made at Newport News Va. By whom made Newport News S.S. & Dry Dock Co. when made 1906  
stered Horse Power  
Horse Power as per Section 28 497 ✓ Owners Associated Oil Co. when made 1906

Port belonging to San Francisco

INES, &c.—Description of Engines Triple expansion. Vertical No. of Cylinders 3 No. of Cranks 3  
of Cylinders 28" 44" 74" Length of Stroke 54 Revs. per minute 66 Dia. of Screw shaft as per rule 15.87 ✓  
Tunnel shaft as per rule 14.887 ✓ Dia. of Crank shaft journals as per rule 14.79 ✓ Dia. of Crank pin 15" Lgth. of stern bush 6'-0"  
as fitted none Dia. of screw 17'-6" Pitch of screw 20 ft as fitted 15" Size of Crank webs 9 1/2" x 30" Dia. of thrust shaft under

Feed pumps 2 Diameter of ditto 9 x 6 Stroke 10 No. of blades 4 State whether moveable yes Total surface 100 sq'  
Bilge pumps 2 Diameter of ditto 9 x 6 Stroke 10 Can one be overhauled while the other is at work yes  
Donkey Engines 2 Sizes of Pumps 3-3" Can one be overhauled while the other is at work yes

ine Room 2-3 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps 1-3" Fine hold. 1-3" F.P.T. ✓  
A.P.T. 1-10" In Holds, &c.

ge injections 1 sizes 10" Connected to condenser, or to circulating pump circ pump a separate donkey suction fitted in Engine room & size yes 4" ✓  
e 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 ✓  
onnections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves ✓  
ixed 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 below ✓  
ch 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 ✓  
s are carried through the bunkers none How are they protected ✓

ps, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yes. ✓  
ge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes. ✓  
stern tube, propeller, screw shaft, and all connections examined in dry dock yes Is the screw shaft tunnel watertight none ✓  
with a watertight door (engines aft) worked from ✓

, &c.— (Letter for record a) Total Heating Surface of Boilers 8502 sq. ft. Is forced draft fitted no ✓  
escription of Boilers 3. Single ended, Scotch Working Pressure 180 lb. Tested by hydraulic pressure to 360 lb. ✓  
Can each boiler be worked separately yes Area of fire grate in each boiler 88.8 No. and Description of safety valves to 360 lb. ✓  
2. Spring Area of each valve 16-9 sq" Pressure to which they are adjusted 180 lb. Are they fitted with easing gear yes. ✓  
ce between boilers or uptakes and bunkers or woodwork 16" Mean dia. of boilers 15'-9" Length 10'-6" Material of shell plates steel ✓  
ange of tensile strength 27-32 Are they welded or flanged no Descrip. of riveting: cir. seams double riv long. seams double butt ✓  
et holes in long. seams 1 7/16" Pitch of rivets 8 1/2" Size of manhole in shell 12 x 16" ✓  
strength of longitudinal joint rivets 83% Working pressure of shell by rules 215 lb. ✓  
ting ring 7 x 1 7/8" No. and Description of Furnaces in each boiler 4. Morrison Material steel Outside diameter 45 1/16" ✓  
part top } Thickness of plates crown 3/16" bottom 1/8" Description of longitudinal joint weld ✓  
of furnace by the rules 239 1/8 Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16" ✓  
ditto: Sides 7 1/4 x 6 3/4" Back 7 1/4 x 7 1/4" Top 8 x 6 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 203 ✓  
hou Diameter at smallest part 1.495 Area supported by each stay 135 sq" Working pressure by rules 208 End plates in steam space: iron ✓  
Thickness 3/4" Pitch of stays 16 x 17 How are stays secured nuts & bolts Working pressure by rules 225 ✓  
lest part 3 1/2 Area supported by each stay 272 sq" Working pressure by rules 181 Material of Front plates at bottom steel ✓  
aterial of Lower back plate steel Thickness 3/4" Greatest pitch of stays 24 3/4 x 29 1/2 Working pressure of plate by rules 195 ✓  
3 Pitch of tubes 4 x 4 1/4" Material of tube plates steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 8 1/4" ✓  
le water spaces 1/4" Working pressures by rules 194 Girders to Chamber tops: Material iron Depth and 8 ✓  
at centre 8 x 1" (2) Length as per rule 30 Distance apart 8 Number and pitch of Stays in each 4 - 6 3/4" ✓  
by rules 229 Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked ✓  
Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet ✓  
of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓  
Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓  
end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓

W1351-0184



**DONKEY BOILER**— No. *One* Description *Multitubular, Scotch.*  
 Made at *Newport News* By whom made *Newport News Sh & Dry Dock Co* When made *1902-6* Where fixed *Stokehold.*  
 Working pressure *180* tested by hydraulic pressure to *360* No. of Certificate *15* Fire grate area *44 sq ft* Description of safety valves *Spring.*  
 No. of safety valves *2* Area of each *9* Pressure to which they are adjusted *180* If fitted with casing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Diameter of donkey boiler *14' 6"* Length *10' 6"* Material of shell plates *Steel* Thickness *1 5/32"* Range of tensile strength *27,322* Descrip. of riveting long. seams *Double butt straps, Two.* Dia. of rivet holes *1"* Whether punched or drilled *drilled* Pitch of rivets *3 1/2"*  
 Lap of plating *7"* Per centage of strength of joint Rivets *84.1%* Thickness of shell crown plates *5/8"* Radius of do. *—* No. of Stays to do. *—*  
 Dia. of stays. *—* Diameter of furnace Top *—* Bottom *—* Length of furnace *7' 0"* Thickness of furnace plates *43/64"* Description of joint *weld* Thickness of furnace crown plates *43/64"* Stayed by *—* Working pressure of shell by rules *200 lb.*  
 Working pressure of furnace by rules *211 lb.* Diameter of uptake *—* Thickness of uptake plates *—* Thickness of water tubes *—*

**SPARE GEAR.** State the articles supplied:— *2 Connecting rod bottom end and 2 top end bolts & nuts; one set of coupling bolts; 2 main bearing bolts; one set of feed & bilge pump valves; one set of piston springs; a quantity of assorted bolts & nuts; Iron of various sizes; also lathe, drilling machine etc.*

The foregoing is a correct description,  
*W. A. Port* Manufacturer.

Dates of Survey while building	During progress of work in shops—	General Manager,	
		1902 June 4. 9. 20. 26. July. 3. 7. 11. 17. 28. Aug 4. 7. 14. 18. 26. 28. Sep. 6. 12. 19. 26. Oct. 2. 11. 17. 24. 31. Nov. 6. 7. 12. 28. Dec 5. 12. 22. 1903 Jan. 7. 19. 23. Feb 2. 14. 27. Apr 3. May 21. 30. 31. Nov 1. 2. 7. 1906 Oct 31. 1906 Feb 16. Mar 12. 20. Apr 14. Sep 26. Dec 9. 24. 26. 29.	
	During erection on board vessel—	30. 31. Nov 1. 2. 3. 5. 6. 7.	
	Total No. of visits	61	

Is the approved plan of main boiler forwarded herewith *at London*  
 " " " donkey " " " *Do*

**General Remarks** (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been constructed under Special Survey, in accordance with the Rules & the approved plans; the workmanship and materials are good; the steam pipes have been tested to 360 lbs per sq. inch water pressure; Material of screw shaft 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 *—*  
 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 *—*

*the oil pumping arrangements have been tested and found satisfactory; engines and boilers tried under steam and found to work in a satisfactory manner; the boilers are fitted with oil burning appliances, (Hagan type), and worked well; and, in my opinion, entitle the vessel to have the notation L.M.C. 11-06. 'Elec light.' 'Fuel oil' entered in the Register Book.*

It is submitted that this vessel is eligible for  
**THE RECORD. + L.M.C. 11-06 'Elec. Light'**  
*Fitted for liquid fuel*  
*Machy Aft*  
*J. M.*  
*18/6/07*

The amount of Entry Fee... *\$ 10. 00.* When applied for, *22/5 907*  
 Special ... *\$ 224. 45.* Fees reduced—*set by 13/8/07*  
 Donkey Boiler Fee ... *\$ 10. 00.* When received, *—*  
 Travelling Expenses (if any) *\$ 122. 55.*

*J. E. Hunter.*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute  
 Assigned

*FRI. 15 JUL '1907*  
*+ L.M.C. 11-06*  
*'Elec. Light'*  
*Fitted for liquid fuel*

MACHINERY CERTIFICATE  
 WRITTEN.

Lloyd's Register  
 Foundation

Certificate (if required) to be sent to Baltimore Ind.