

## REPORT ON MACHINERY.

No. 2055

REC'D NEW YORK

March 15, 1917

Received at London Office

Date of writing Report 13<sup>th</sup> March 1917 When handed in at Local Office 13<sup>th</sup> March 1917 Port of Baltimore Md.No. in Survey held at Baltimore Md. Date, First Survey 4<sup>th</sup> Nov 1915 Last Survey 24<sup>th</sup> Feb. 1917  
Reg. Book. 44-Supp on the Twin Screw Motor Vessel "Holden Evans" (Number of Visits 45) Tons { Gross 3253  
Net 2025

Master W. Habel. Built at Baltimore Md. By whom built Baltimore D. &amp; S. B. Co. When built 1917.

Engines made at Stockholm By whom made J. &amp; C. G. Bolinder Co. when made 1918.

Donkey Reg. Bank N. J. Boilers made at Baltimore Md. By whom made The Roberts Boiler Co. when made 1917.

Registered Horse Power 1000 (2 Engines) Owners Continental Transportation &amp; Oil Co. Port belonging to Wilmington Del.

Nom. Horse Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.

2 Bolinder engines. Cylinders 2 No. of Cylinders No. of Cranks  
ENGINE, &c.—Description of Engines S. 11548-51 P. 11568-71  
Dia. of Cylinders 8.5 Length of Stroke 8.38 Revs. per minute 9.75 Material of Ingot  
Dia. of Screw shaft as per rule 9.75 as fitted 9.75 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 Lapped Length of stern bush 3'-10"

Dia. of Tunnel shaft as per rule 8.5 as fitted 9.75 Dia. of Crank shaft journals as per rule 8.38 as fitted 9.75 Dia. of Crank webs do Dia. of thrust shaft under  
collars do Dia. of screw 8'-6" Pitch of Screw 4'-0" No. of Blades 3 State whether moveable No Total surface 27.83 ft

No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Donkey Engines 8 Sizes of Pumps D. 12x8x12 2 D. 7x6x10 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 of 3 1/2 In Holds, &c. Forehold 2-3 1/2 Wing cargo  
spaces 1-3 1/2 and cargo tank suction.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room &amp; size 1-3 1/2

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 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 Both

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 24/10/16 of Stern Tube 24/10/16 Screw shaft and Propeller 22/1/17

Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

BOILERS, &amp;c.—(Letter for record S.) Manufacturers of Steel Lukens I &amp; S Co. Also 1 Roberts Boiler Report attached

Total Heating Surface of Boilers 618.33 Is Forced Draft fitted No No. and Description of Boilers 1-Scotch

Working Pressure 150 lbs Tested by hydraulic pressure to 225 lbs Date of test 15-1-17 No. of Certificate 89

Can each boiler be worked separately Yes Area of fire grate in each boiler 21.66 ft No. and Description of Safety Valves to

each boiler 1 D. Spring Area of each valve 4.908 Pressure to which they are adjusted 150 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 8'-0" Length 10'-0" Material of shell plates S.

Thickness 5/8 Range of tensile strength 28/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.L.

long. seams J.R.B. Diameter of rivet holes in long. seams 15/16 Pitch of rivets 6 5/32 Lap of plates or width of butt straps 15 3/4-10"

Per centages of strength of longitudinal joint rivets 101 Working pressure of shell by rules 157.4 Size of manhole in shell 15"x11"

Size of compensating ring 29"x25" No. and Description of Furnaces in each boiler 1 Morrison Material S. Outside diameter 48"

Length of plain part top Thickness of plates crown 1/2 Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 157.4 Combustion chamber plates: Material S. Thickness: Sides 9/16 Back 9/16 Top 9/16 Bottom 9/16

Pitch of stays to ditto: Sides 7"x6 7/8 Back 7"x7 Top 7"x6 3/4 stays are fitted with nuts or riveted heads Riv Heads Working pressure by rules 165.3

Material of stays S. Area at smallest part 9664 Area supported by each stay 494 Working pressure by rules 157.7 End plates in steam space:

Material S. Thickness 5/8 with 1/2 double Pitch of stays 13 1/2 x 13 1/2 How are stays secured D. h. &amp; w. Working pressure by rules 198.9 Material of stays S.

Area at smallest part 3.719 Area supported by each stay 182.25 Working pressure by rules 212 Material of Front plates at bottom S.

Thickness 5/8 Material of Lower back plate S. Thickness 5/8 Greatest pitch of stays 6"x8" Working pressure of plate by rules 200

Diameter of tubes 3 Pitch of tubes 4"x4 1/4 Material of tube plates S. Thickness: Front 5/8 Back 9/16 Mean pitch of stays 8"

Pitch across wide water spaces 8 1/2 Working pressures by rules 159 Girders to Chamber tops: Material S. Depth and

thickness of girder at centre 7"x1 3/4 Length as per rule 30 Distance apart 6 3/4 Number and pitch of stays in each 3-Y

Working pressure by rules 165 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 rivet

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

If 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

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VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. Description When made Where fired  
Made at By whom made No. of Certificate Fire grate area Description of Safety  
Working pressure tested by hydraulic pressure to Date of test Pressure to which they are adjusted Date of adjustment  
Valves No. of Safety Valves Area of each Dia. of donkey boiler Length  
If fitted with easing gear If steam from main boilers can enter the donkey boiler  
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  
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 Radius of do. Stayed by  
Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:— 16 Piston rings, 24 Valve Springs, 8 Governor springs, 32 air valve springs, 18 oil valve spindles, 4 fuel Valve spindles, 8 nozzles for fuel injection, 2 valve spindles for injection, 4 Con rod top end & 4 Con rod bottom end bolts, 1 set coupling bolts, one propeller shaft, 1 set bulge & circulating pump valves, cylinder head, one piston complete, springs valves & seats for all pumps etc assorted bolts & nuts & iron of various sizes.

The foregoing is a correct description,

BALTIMORE DRY DOCK & SHIP BUILDING CO.

Manufacturer.

Dates of Survey while building  
During progress of work in shops -- Nor 4 1915. Feb 19 16 - 14 16. 23. 25. 28. March 2. 6. 9. 15. 17. 22. Apr. 19. May 1. 2. 5. 6. Oct. 4. 13. 18. 24. 25. 31  
During erection on board vessel --- Nov. 6. 9. 13. 15. 31. Nov 6 13. 15. 20. 24. Dec 4. 6. 11. 14. 18. 26. 28. Jan 5. 15. 20. 22. 25. 27. 29 Feb 3. 12. 24  
Total No. of visits 45

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders Please see Stockholm Reports. Rods  
Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft 18/10/16. Propeller 15/1/17  
Stern tube 13/10/16. Steam pipes tested Engine and boiler seatings 20/11/16. Engines holding down bolts 4/12/16.  
Completion of pumping arrangements 15/2/17. Boilers fixed 20/11/16. Engines tried under steam 25/1/17  
Donkey main boiler safety valves adjusted 25<sup>th</sup> Jan 1917 Thickness of adjusting washers Scotch 1/4 Roberts 1/16.  
Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Ingot Workmen's Shaft 299 H.A.  
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. Spare 300 H.A.  
Material of Steam Pipes Test pressure

General Remarks (State quality of workmanship, opinions as to class, &c. The Two Bolinder engines built at Stockholm have now been efficiently installed in this vessel. The fuel tanks etc have been tested in accordance with the Rules of this Society. The Scotch Type Donkey Boilers built in accordance with the rules of this Society and the approved plans. The workmanship & materials are good. Donkey Boilers fitted for oil fuel. Requirements of Section 49 complied with. All main engines, pumps, tried alongside works and in Bay and worked satisfactorily.

The Machinery of this vessel is in my opinion eligible for notation + L.M.C. 2. 17. Electric Light. The Machinery of this vessel is a duplicate of Motor vessel "Pennant" - Baltimore Report No 2004. Attached to this report is Stockholm Report No 1602 on Sturb. Engine & N.York Report No 13298 on Roberts Donkey Boilers. (Stockholm Report on Port Engine not received)

The amount of Entry Fee .. £ 15.00  
Special Installation £ 14.5.00  
Donkey Boiler Fee £ 6.5.00  
Travelling Expenses (if any) £ 9.50  
When applied for. 26/2/1917  
When received. March 1917

H. A. Stewart  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute New York MAR 22 1917

Assigned + Lmb 2.17 Elec Light