

RESTRICTED

GENERAL INFORMATION

**INCLUDING DESCRIPTIONS AND
TESTS OF ELECTRIC AUXILIARIES**

**U. S. S. TORPEDO BOAT DESTROYERS
Nos. 119-124 AND 181-185**

**INFORMATION RELATIVE TO ITEMS UNDER COGNIZANCE
OF THE BUREAU OF CONSTRUCTION AND REPAIR
NAVY DEPARTMENT**

RESTRICTED

CONFIDENTIAL!

Serial No. 36

GENERAL INFORMATION

INCLUDING DESCRIPTION AND TESTS
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TORPEDO BOAT DESTROYERS

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U. S. S.

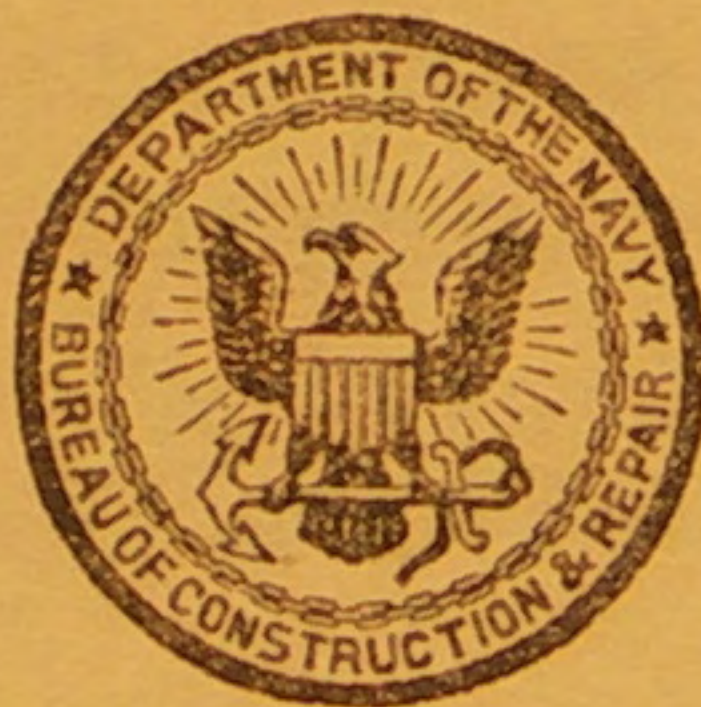
LAMBERTON
RADFORD
MONTGOMERY
BREESE
GAMBLE
RAMSAY

HOPEWELL
THOMAS
HARADEN
ABBOT
BAGLEY

Information relative to items under cognizance of
Bureau of Construction and Repair
Navy Department, Washington, D. C.

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INTRODUCTION.

HISTORICAL DATA.

Authorized by act of Congress August 29, 1916, and March 4, 1917.

Vessel built by Newport News Shipbuilding & Dry Dock Co.

Contract signed June 29, 1917, for Destroyers 119-124.

Contract signed September 28, 1917, for Destroyers 181-185.

Contract date of completion, none set.

	Lamberton, 119.	Radford, 120.	Montgomery, 121.	Breese, 122.	Gamble, 123.	Ramsay, 124.
Keel laid.....	Oct. 1, 1917	Oct. 2, 1917	Oct. 2, 1917	Nov. 10, 1917	Nov. 12, 1917	Dec. 21, 1917
Vessel launched.....	Mar. 30, 1918	Apr. 5, 1918	Mar. 23, 1918	May 11, 1918	May 11, 1918	June 8, 1918
Date of delivery to Government.....	Aug. 20, 1918	Sept. 28, 1918	July 25, 1918	Oct. 22, 1918	Nov. 27, 1918	Feb. 14, 1919
Date of official preliminary trial.....	Aug. 17, 1918	Sept. 26, 1918	July 20, 1918	Oct. 19, 1918	Nov. 24, 1918	Feb. 12, 1919
Vessel commissioned....	Aug. 20, 1918	Sept. 28, 1918	July 26, 1918	Oct. 22, 1918	Nov. 28, 1918	Feb. 14, 1919

U. S. S. *Lamberton*, christened by Miss Isabel S. Lamberton.

U. S. S. *Radford*, christened by Miss Mary Lovell Radford.

U. S. S. *Montgomery*, christened by Mrs. Andrew Jones.

U. S. S. *Breese*, christened by Mrs. Gilbert McIlvaine.

U. S. S. *Gamble*, christened by Mrs. George H. Young.

U. S. S. *Ramsay*, christened by Miss Mary Virginia Ramsay.

	Hopewell, 181.	Thomas, 182.	Haraden, 183.	Abbot, 184.	Bagley, 185.
Keel laid.....	Jan. 19, 1918	Mar. 23, 1918	Mar. 30, 1918	Apr. 5, 1918	May 11, 1918
Vessel launched.....	June 8, 1918	July 4, 1918	July 4, 1918	July 4, 1918	Oct. 19, 1918
Date of delivery to Government.....	Mar. 21, 1919	Apr. 25, 1919	June 6, 1919	July 18, 1919	Aug. 26, 1919
Date of official preliminary trial.....	Mar. 19, 1919	Apr. 22, 1919	June 3, 1919	July 15, 1919	Aug. 21, 1919
Vessel commissioned.....	Mar 22, 1919	Apr. 26, 1919	June 6, 1919	July 19, 1920	Aug. 27, 1920

U. S. S. *Hopewell*, christened by Mrs. Grote Hutcheson.

U. S. S. *Thomas*, christened by Mrs. C. C. Thomas.

U. S. S. *Haraden*, christened by Miss Mabel Beatrice Stephens.

U. S. S. *Abbot*, christened by Miss Louise Abbot Cooke.

U. S. S. *Bagley*, christened by Mrs. Adelaide Bagley.

DIMENSIONS AND DISTANCES.

Length over all, 314 feet 4½ inches.

Length between perpendiculars, 310 feet.

Breadth, molded, 30 feet 11½ inches.

Breadth, over guards, 31 feet 8½ inches.

Depth, molded at side (frame No. 89), 20 feet 7¾ inches.

Depth, molded at center (frame No. 89), 21 feet 9½ inches.

Tons per inch (9 feet 1¾ inches W. L.), 15.44.

Mean trial displacement, 1,207 tons at 9 feet 3¼ inches draft.

Wetted surface (9 feet 1¾ inches W. L.), 10,030 square feet.

Coefficient block (designed 9 feet 1¾ inches W. L.), 0.476.

Coefficient prismatic (designed 9 feet 1¾ inches W. L.), 0.629.

Coefficient midship (designed 9 feet 1¾ inches W. L.), 0.757.

Coefficient water line (designed 9 feet $1\frac{3}{4}$ inches W. L.), 0.681.

Area of rudder, 66.98 square feet.

Center of buoyancy (9 feet $1\frac{3}{4}$ inches W. L.) above bottom of keel, 5.56 feet.

Center of buoyancy (9 feet $1\frac{3}{4}$ inches W. L.) forward of middle perpendicular, 1.73 feet.

Transverse metacenter above C. B. (9 feet $1\frac{3}{4}$ inches W. L.), 8.78 feet.

Longitudinal metacenter above C. B. (9 feet $1\frac{3}{4}$ inches W. L.), 750 feet.

Center of gravity of water line abaft middle perpendicular, 4.17 feet.

Center of gravity of full-load water line abaft middle perpendicular, 4.88 feet.

Frame spacing, 1 foot 9 inches.

LONGITUDINAL DISTANCES.

Projection of stern abaft A. P., 1 foot $4\frac{1}{2}$ inches.

Axis of rudder, forward of A. P., 6 feet $4\frac{1}{2}$ inches.

Forward end of straight keel, from F. P., 11 feet $\frac{1}{2}$ inch.

After end of straight keel, from A. P., 30 feet.

Length of straight keel, 268 feet $11\frac{1}{2}$ inches.

Forward end of bilge keel from F. P., 92 feet 9 inches.

After end of bilge keel, from A. P., 78 feet 9 inches.

F. P. to center of foremast, at main deck, 90 feet 8 inches.

F. P. to center of stack No. 1, at main deck, 107 feet $4\frac{9}{16}$ inches.

F. P. to center of stack No. 2, at main deck, 123 feet $4\frac{13}{16}$ inches.

F. P. to center of stack No. 3, at main deck, 145 feet $10\frac{3}{4}$ inches.

F. P. to center of stack No. 4, at main deck, 161 feet 11 inches.

Center of mainmast, at main deck, to A. P., 51 feet 5 inches.

Center of shaft struts forward of A. P., 21 feet 3 inches.

Propellers, forward of A. P., 16 feet $9\frac{17}{32}$ inches.

HEIGHTS ABOVE DESIGNER'S WATER LINE (9 FEET $1\frac{3}{4}$ INCHES).

Bridge at center (frame No. 40), 22 feet 8 inches.

Bridge at outboard ends (frame No. 52), 21 feet $1\frac{3}{8}$ inches.

Forward smokestack on C. L., 38 feet 10 inches.

Lookout platform, forward and aft, 66 feet 4 inches.

Signal yard, 86 feet 10 inches.

Radio, 14 feet 10 inches.

Upper wireless aerial, 92 feet $10\frac{1}{4}$ inches.

Lower wireless aerial, 66 feet $2\frac{1}{4}$ inches.

Main deck, at side (frame No. 76), 12 feet $2\frac{3}{4}$ inches.

Main deck, at side (frame No. 89), 11 feet $6\frac{3}{4}$ inches.

Top of afterdeck house, 16 feet 9 inches.

Freeboard at stem, 17 feet $3\frac{3}{4}$ inches.

Freeboard at stern, 8 feet $3\frac{1}{4}$ inches.

CONDITIONS OF LOADING.

Ship complete, ready for service in every respect, with full complement of officers and crew with their effects, and consumable load, is tabulated below for Normal, Full, and Emergency conditions.

In the design of the vessel the mean draft corresponding to the "designer's water line," viz, 9 feet 1 $\frac{3}{4}$ inches, contemplates the condition of loading given under the heading "NORMAL."

Kind.	Normal weight.	Full weight.	Emergency weight.
	Tons.	Tons.	Tons.
Hull weights and fittings.....	432	432	432
Engineering weights, except water.....	447	447	447
Water in all machinery.....	35	35	35
Feed water.....	14	21	40
Drinking water.....	10	15	30
Fuel oil.....	150	225	275
Battery complete.....	41	41	41
Ammunition, including torpedoes.....	35	36	36
Construction and repair stores furnished by contractor.....	7	7	7
Engineering stores furnished by contractor.....	1	1	1
Equipment stores furnished by Government.....	13	13	13
Outfits furnished by Government.....	8	10	12
Supplies stores furnished by Government.....	12	15	18
Officers, crew, and effects.....	10	10	10
Total.....	1, 215	1, 308	1, 397

DESIGNED COMPLEMENT.

(Section X-3.)

Officers:

Commanding officer.....	1
Wardroom officers.....	5

Seaman branch:

Chief boatswain's mate.....	1
Boatswain's mate, second class.....	1
Coxswain.....	1
Chief gunner's mates.....	2
Gunner's mates, first class.....	2
Gunner's mates, second class.....	2
Chief quartermaster, navigating.....	1
Quartermaster, first class.....	1
Quartermasters, second class.....	2
Seamen.....	16
Ordinary seamen.....	13
Total.....	42

Artificer branch:

Electrician, first class.....	1
Electricians, first class, radio.....	2
Electrician, second class, radio.....	1
Carpenter's mate, second class.....	1
Total.....	5

Artificer branch (engine-room force):

Chief machinist's mates.....	3
Machinist's mates, first class.....	3
Machinist's mates, second class.....	3
Chief water tender.....	1
Water tenders.....	5
Boilermaker.....	1

Artificer branch (engine-room force)—Continued.

Blacksmith.....	1
Coppersmith.....	1
Oilers.....	4
Firemen, first class.....	10
Firemen, second class.....	7
Total.....	39

Special branch:

Yeoman, first class, commanding officer.....	1
Yeoman, second class, engineer department.....	1
Hospital steward.....	1
Total.....	3

Commissary branch:

Ship's cook, first class.....	1
Ship's cook, third class.....	1
Total.....	2

Messmen branch:

Cabin steward.....	1
Cabin cook.....	1
Mess attendants.....	2
Total.....	4

RECAPITULATION.

Officers.....	6
Crew.....	95
Total.....	101

DEPTH-CHARGE LAUNCHING GEAR.

Portable tracks for depth charges are fitted starboard and port on the main deck, extending from frame 165 to 175½, the tracks inclining outboard so that the after ends of the rails extend over the ship's side to permit the depth charges falling clear of the vessel.

A system of levers operated from starboard side of bridge by wire-rope leads permits of dropping a charge from either track, as desired.

The depth charges, contained in cylindrical cans, roll automatically into position for dropping. The releasing gear allows but one charge to drop at a time.

Locking arrangements are provided for securing the charges when the releasing gear is not in use.

LIST OF AMMUNITION STOWAGE.

(Section U-1.)

Type.	Compartment.	Total capacity.	Allowance.	Number in each box or tank.	Length.	Stowage sizes, width.	Depth or diameter.	Weight of each box or tank.
					<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Pounds.</i>
4-inch ammunition...	D-106M..	177	177.....	1.....	51.92.....		6.64.....	83.75.
4-inch drill ammunition.	D-106M..	6	6.....	1.....				
3-inch antiaircraft....	D-106M..	96	16.....	6.....	9 ⁹ / ₁₆		13 ⁸ / ₁₆ by 21	235.
War heads.....	D-105.....	6	6.....	Not boxed.	28 ¹ / ₈		21 dia.	426.
4-inch ammunition...	A-109M..	239	223.....	1.....	51.92.....		6.64.....	83.75.
War heads.....	A-112M..	6	6.....		28 ¹ / ₈		21 dia.	426.
3-inch antiaircraft....		108	18.....	6.....				235.
.30 caliber ball cartridge 1906.		24,000	20 boxes.	1,200.....	8 by 14 by 16 ¹ / ₄ ...			100.
Do.....		13,200	11 boxes.	1,200.....	8 ¹ / ₄ by 9 ¹ / ₂ by 34 ¹ / ₂ ...			100.
.30 caliber ball cartridge 1893.		4,800	4 boxes.	1,200.....	7 ¹ / ₂ by 9 by 34 ¹ / ₂ ...			99.75.
.30 caliber blank 1909.		2,000	1 box....	2,000.....	12.45 by 11 ¹ / ₄ by 17 ¹ / ₈ ...			84.
.30 caliber blank 1898.		4,000	4 boxes..	1,000.....	8 by 13 ³ / ₈ by 19 ¹ / ₄ ...			44.5.
.30 caliber dummy 1906.		1,000	1 box....	1,000.....	7 by 12 ¹ / ₂ by 21 ⁵ / ₈ ...			66.
.45 caliber ball 1911..		6,000	3 boxes..	2,000.....	7 ³ / ₈ by 12 ¹ / ₄ by 16 ¹ / ₄ ...			110.
Impulse primers.....		144	6 boxes..	24.....	3.32 by 4.82 by 3.036.			2 lbs., 3 ozs.
Superheater fuses.....		175	7 boxes..	25.....	Do.....			1 lb., 2 ozs.
Impulse powder.....		58	1 box....	50 pounds..	10 ³ / ₈ by 10 ⁵ / ₈ by 16.6.			58.
Nett cutters.....		12	3.....	4 in box...	7 ⁹ / ₃₂ by 9 ¹ / ₂ by 32 ¹ / ₂ ...			55.
Rifles.....		30	5.....	6.....	8 by 13.75 by 45 ¹ / ₄ ...			
Revolvers.....		30	5 racks...	6.....	15 ¹ / ₄ by 16.....			

GENERAL INFORMATION.

BATTERY.

GUNS.

(Section A-5.)

Caliber.	Location.		Gun No.
	Deck.	Frame.	
4-inch rapid-fire guns.....	Main.....	Center line 3 inches forward frame 28.	1
Do.....	Top of galley house....	Starboard 3 inches aft frame 76.....	2
Do.....	do.....	Port 3 inches aft frame 76.....	3
Do.....	Main.....	Center line 2 inches aft frame 163....	4

ANTIAIRCRAFT.

3-inch antiaircraft guns.....	Main.....	Center line frame 36.....	1
Do.....	do.....	Port frame 62½.....	2

TORPEDO TUBES.

21 feet by 21 inches diameter triple torpedos.....	Main.....	Starboard 7 inches aft frame 107.....	1
Do.....	do.....	Port 5½ inches aft frame 99.....	2
Do.....	do.....	Starboard 12 inches aft frame 137....	3
Do.....	do.....	Port 9 inches aft frame 127.....	4

SMALL ARMS.

.30-caliber Lewis machine gun.....	Main deck.....	Starboard frame 60.....	1
Do.....	Top of after deck house.	Center frame 157.....	1

DEPTH CHARGE PROJECTING GUN.

6-inch diameter.....	After deck house.....	Center line 1½ inches aft frame 154...	1
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BOATS.

(Section U-5.)

Name.	No.	Carrying capacity (each).
24-foot motor sailing launch.....	1	19
24-foot whale boat.....	1	23
21-foot motor boat.....	1	10
14-foot wherry.....	1	5
10-foot punt.....	1

MACHINERY.

(A) Engines: There are two main turbines, connected direct to their respective propeller shafts, and one cruising turbine connected through reduction gearing and a clutch to the starboard propeller shaft. The port turbine and the cruising turbine are located in the forward engine room and the starboard main turbine in the after engine room. At cruising speeds the cruising turbine is used as a high-pressure turbine with the port turbine operating under low pressure. At higher speeds the cruising turbine is disconnected and the ship is driven by the two main turbines operating independently. The reverse turbines are located in the after ends of the main turbine casings.

(B) Propellers and shafts:

Diameter of propeller shafting.....	11½ inches.
Diameter of line shafting.....	10½ inches.
Diameter of axial hole in shafting.....	7 inches.
Number of propellers.....	2.
Number of blades, each propeller (cast solid).....	3.
Diameter of propellers (designed).....	7 feet 9½ inches.
Pitch of propellers, fixed (designed).....	7 feet 5 inches.
Ratio of diameter to pitch (designed)=P=.....	1 to 0.9525.
Area, projected (designed) D.....	30.88 square feet.
Area, helicoidal (designed).....	34.88 square feet.
Area, disk (designed).....	47.67 square feet.
Lower tip of blades below bottom of keel.....	7¼ inches.
Tips of blades below 9 feet W. L.....	1 foot 10½ inches.
Material of propellers.....	Composition "Mn-C," grade A.
Starboard propeller is right hand.	
Port propeller is left hand.	

(C) Boilers:

Kind of boiler (oil burning); water tube, Navy light type.	
Number (2 in each boiler room).....	4.
Designed working pressure.....	265 pounds to square inch.
Heating surface, each boiler.....	7,000 square feet.
Cubical contents of combustion chamber, each boiler.....	732.5 cubic feet.
Diameter of main steam pipes.....	10½ inches.
Diameter of steam pipe from each boiler.....	7½ inches.
Number of oil burners, each boiler.....	12.
Number of furnaces, each boiler.....	1.
Smoke pipes, height above main deck.....	25 feet.
Number of smoke pipes.....	4.
Area of section through one smoke pipe.....	20.29 square feet.