RESTRICTED

Serial No. 31

GENERAL INFORMATION

INCLUDING DESCRIPTION AND
TESTS OF LIFTING APPLIANCES

TORPEDO BOAT DESTROYERS Nos. 246 to 265

U. S. S. CHAUNCEY CLASS

INFORMATION RELATIVE TO ITEMS UNDER COGNIZANCE
OF BUREAU OF CONSTRUCTION AND REPAIR
NAVY DEPARTMENT, WASHINGTON, D. C.

1922

RESTRICTED

[redacted]

Serial No. 31

GENERAL INFORMATION

INCLUDING DESCRIPTION AND TESTS
OF ELECTRIC AUXILIARIES

TORPEDO BOAT DESTROYERS Nos. 296 to 335

U. S. S. CHAUNCEY CLASS

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

1922

Finished Plan No. 41

BUREAU OF SHIPS
NATIONAL ARCHIVES FILES

WASHINGTON
GOVERNMENT PRINTING OFFICE
1922

United States in Aeronautic Interallied Commission of Control; June 1, 1920, ordered to the United States as aide for aviation, staff of Admiral H. B. Wilson, commander in chief of the Atlantic Fleet; held this position at the time of his death, which was occasioned by inhaling flame from a burning airplane after its crash, and though badly wounded he was endeavoring to rescue his companion from the burning plane.

U. S. S. "MELVIN."

(DESTROYER NO. 335.)

Named in honor of Lieut. (Junior Grade) John T. Melvin, U. S. Naval Reserve Force.

Born in Selma, Ala., October 16, 1887; died at sea November 5, 1917.

Appointed midshipman United States Naval Academy July 6, 1907; graduated June 2, 1911; ensign July 7, 1911; promoted to lieutenant (junior grade) March 22, 1915; resigned August 20, 1915; appointed lieutenant (junior grade) United States Naval Reserve Force February 9, 1917, and assigned to duty at New Haven, Conn., and attached to the patrol boat *Alcedo*, and lost his life when that vessel was sunk by a German submarine in the war zone. The *Alcedo* was the first American war vessel to go down in the World War.

INTRODUCTION.

HISTORICAL DATA.

Authorized by act of Congress, March 4, 1917, and October 6, 1917.

Vessel built by Bethlehem Shipbuilding Corporation (Ltd.), San Francisco, Calif.

Contract signed December 6, 1917.

Contract date of completion: To be constructed as expeditiously as practicable.

United States torpedo boat destroyers.	No.	Keel laid.	Launched.	Official trial.	Delivered and commissioned.	Christened by—
Chauncey	296	June 17, 1918	Sept. 29, 1918	June 16, 1919	June 25, 1919	Miss Dorothy Todd.
Fuller	297	July 4, 1918	Dec. 5, 1918	Feb. 4, 1920	Feb. 28, 1920	Miss Gladys Sullivan.
Percival	298	.....do.....	.....do.....	Mar. 25, 1920	Mar. 31, 1920	Miss Eleanor Wurtsbaugh.
John Francis Burns	299	.....do.....	Nov. 10, 1918	Apr. 20, 1920	May 1, 1920	Mrs. Julius Kahn.
Farragut	300	.....do.....	Nov. 21, 1918	May 18–23, 1920	June 4, 1920	Mrs. Templin M. Potts.
Somers	301	.....do.....	Dec 28, 1918	June 2, 1920	June 23, 1920	Miss Anna Maxwell Jayne.
Stoddert	302	.....do.....	Jan. 8, 1919	June 16, 1920	June 30, 1920	Mrs. Gavin McNab.
Reno	303	.....do.....	Jan. 22, 1919	July, 19, 1920	July 23, 1920	Miss Kathryn B. Anderson.
Farquhar	304	Aug. 13, 1918	Jan. 18, 1919	July 26, 1920	July 31, 1920	Mrs. James Reed, jr.
Thompson	305	Aug. 14, 1918	Jan. 15, 1919	Aug. 10, 1920	Aug. 16, 1920	Mrs. H. H. Harris.
Kennedy	306	Sept. 25, 1918	Feb. 15, 1919	Aug. 20, 1920	Aug. 28, 1920	Mrs. D. T. Essner.
Paul Hamilton	307	.....do.....	Feb. 21, 1919	Sept. 15, 1920	Sept. 24, 1920	Miss Justine McGrath.
William Jones	308	Oct. 21, 1918	Apr. 9, 1919	Sept. 23, 1920	Sept. 30, 1920	Mrs. I. G. McRitchie.
Woodbury	309	Oct. 3, 1918	Feb. 6, 1919	Oct. 12, 1920	Oct. 20, 1920	Miss Katherine Chapin.
S. P. Lee	310	Dec. 31, 1918	Apr. 22, 1919	Oct. 22, 1920	Oct. 30, 1920	Mrs. Phillipa Wyche.
Nicholas	311	Jan. 11, 1919	May 1, 1919	Nov. 8–13, 1920	Nov. 23, 1920	Miss Edith Barry.
Young	312	Jan. 28, 1919	May 8, 1919	Nov. 22, 1920	Nov. 29, 1920	Mrs. John I. Nolan.
Zeilin	313	Feb. 20, 1919	May 28, 1919	Nov. 24, 1920	Dec. 9, 1920	Mrs. William P. Lindley.
Yarborough	314	Feb. 27, 1919	June 20, 1919	Dec. 28, 1920	Dec. 31, 1920	Miss Kate Burch.
LaVallette	315	Apr. 14, 1919	July 15, 1919	Dec. 17, 1920	Dec. 24, 1920	Miss Nancy Lane.
Sloat	316	Jan. 18, 1919	May 14, 1919	Dec. 23, 1920	Dec. 30, 1920	Mrs. Edwin A. Sherman.
Wood	317	Jan. 23, 1919	May 28, 1919	Jan. 11, 1921	Jan. 18, 1921	Mrs. George Kirtland Smith.

United States torpedo boat destroyers.	No.	Keel laid.	Launched.	Official trial.	Delivered and commissioned.	Christened by—
Shirk	318	Feb. 13, 1919	June 20, 1919	Jan. 14, 1921	Jan. 25, 1921	Miss Ida Lawton Dunnigan.
Kidder	319	Mar. 5, 1919	July 10, 1919	Feb. 1, 1921	Feb. 7, 1921	Miss Ethel M. Johnstone.
Selfridge	320	Apr. 28, 1919	July 25, 1919	Feb. 4, 1921	Feb. 17, 1921	Mrs. Catherine Kellond.
Marcus	321	May 20, 1919	Aug. 22, 1919	Feb. 15, 1921	Feb. 23, 1921	Mrs. Helen Cowles Marcus.
Mervine	322	Apr. 28, 1919	Aug. 11, 1919	Feb. 18, 1921	Feb. 28, 1921	Miss Eileen D. McCarthy.
Chase	323	May 5, 1919	Sept. 2, 1919	Mar. 3, 1921	Mar. 10, 1921	Mrs. Ray Eitel Ameer.
Robert Smith	324	May 13, 1919	Sept. 19, 1919	Mar. 7, 1921	Mar. 17, 1921	Miss Jane Cooper.
Mullany	325	June 3, 1919	July 9, 1920	Mar. 18, 1921	Mar. 29, 1921	Miss Alice Lee Hall.
Coghlan	326	June 25, 1919	June 16, 1920	Mar. 22, 1921	Mar. 31, 1921	Mrs. Graham Coghlan.
Preston	327	July 19, 1919	Aug. 7, 1920	Apr. 5, 1921	Apr. 13, 1921	Mrs. Josephus Daniels.
Lamson	328	Aug. 13, 1919	Sept. 1, 1920	Apr. 8, 1921	Apr. 19, 1921	Miss Annette Rolph.
Bruce	329	July 30, 1919	May 20, 1920	Sept. 24, 1920	Sept. 29, 1920	Mrs. Annie Bruce.
Hull	330	Sep. 13, 1920	Feb. 18, 1921	Apr. 15, 1921	Apr. 26, 1921	Miss Elizabeth Hull.
MacDonough	331	May 24, 1920	Dec. 15, 1920	Apr. 22, 1921	Apr. 30, 1921	Mrs. Lucy R. Dabney.
Farenholt	332	Sept. 13, 1920	Mar. 9, 1921	Apr. 29, 1921	May 10, 1921	Mrs. Rachel Hovey Fairweather.
Sumner	333	Aug. 27, 1919	Nov. 24, 1920	May 17, 1921	May 27, 1921	Miss Margaret Sumner.
Corry	334	Sept. 15, 1920	Mar. 28, 1921	May 13, 1921	May 25, 1921	Mrs. Sarah M. E. Corry.
Melvin	335	.....do.....	Apr. 11, 1921	May 23, 1921	May 31, 1921	Miss Laura McKinstry.

DIMENSIONS AND DISTANCES.

Length over all, 314 feet 4½ inches.
Length on designed, 9 feet 4 inches water line, 311 feet 2 inches.
Length between perpendiculars (forward perpendicular and section 40), 310 feet.
Breadth, molded, 30 feet 11½ inches.
Breadth, over guards, 31 feet 8¼ inches.
Depth, molded at side (frame No. 88), 20 feet 8⅛ inches.
Depth, molded at center (frame No. 88), 21 feet 10 inches.
Tons per inch (9 feet 4 inches W. L.), 15.53 tons.
Mean trial displacement, 1,215 tons.
Wetted surface (9 feet 4 inches W. L.), 10,220 square feet.
Coefficient, block (designed 9 feet 4 inches W. L.), 0.476.
Coefficient, prismatic (designed 9 feet 4 inches W. L.), 0.627.
Coefficient, midship (designed 9 feet 4 inches W. L.), 0.759.
Coefficient, water line (designed 9 feet 4 inches W. L.), 0.681.
Area of rudder, 69.3 square feet.
Center of buoyancy (9 feet 4 inches W. L.) above bottom of keel, 5.67 feet.
Center of buoyancy (9 feet 4 inches W. L.) abaft middle perpendicular, 0.15 foot.
Transverse metacenter above C. B. (9 feet 4 inches W. L.), 8.50 feet.
Longitudinal metacenter above C. B. (9 feet 4 inches W. L.), 737 feet.
Center of gravity of water line abaft middle perpendicular, 5.44 feet.
Center of gravity of full load water line abaft middle perpendicular, 6.08 feet.
Frame spacing, 1 foot 9 inches.

LONGITUDINAL DISTANCES.

Projection of stern at main deck, abaft A. P. (section 40), 1 foot 4½ inches.
Axis of rudder, forward of A. P. (section 40), 6 feet 4½ inches.
Forward end of straight keel, from F. P., 11 feet.

After end of straight keel, from A. P. (section 40), 42 feet 3 inches.
Length of straight keel, 256 feet 9 inches.
Forward end of bilge keel, from F. P., 92 feet 7 inches.
After end of bilge keel, from A. P. (section 40), 78 feet 10 inches.
F. P. to center of foremast, at main deck, 90 feet 2 inches.
F. P. to center of stack No. 1, at main deck, 107 feet 6¾ inches.
F. P. to center of stack No. 2, at main deck, 121 feet 10¼ inches.
F. P. to center of stack No. 3, at main deck, 146 feet ¾ inch.
F. P. to center of stack No. 4, at main deck, 160 feet ¾ inch.
Center of mainmast, at main deck, to A. P. (section 40), 58 feet.
Center of shaft struts forward of A. P. (section 40), 21 feet 3 inches.
Propellers, forward of A. P. (section 40), 17 feet.

HEIGHTS ABOVE DESIGNER'S WATER LINE.

Bridge at center (frame No. 40), 22 feet 6 inches.
Bridge at outboard ends (frame No. 52), 21 feet 10½ inches.
Forward smokestack on C. L., 38 feet 10 inches.
Lookout platform, 65 feet 7 inches.
Signal yard, 88 feet.
Radio, 17 feet.
Upper wireless aerial, 93 feet forward to 49 feet aft.
Lower wireless aerial, 51 feet forward to 40 feet aft.
Main deck, at side (frame No. 40), 14 feet 3 inches.
Main deck, at side (frame No. 145), 8 feet 11 inches.
Gun platform (frame 66 to frame 81), 21 feet 8 inches.
Top of after deck house (6 inches aft of frame No. 144), 16 feet 8 inches.
Freeboard at stem, 17 feet 1 inch.
Freeboard at stern, 8 feet 1 inch.

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 4 inches, contemplates the condition of loading given under the heading "Normal."

Kind.	Normal weight.	Full weight.	Emergency weight.	Kind.	Normal weight.	Full weight.	Emergency weight.
Hull	405.89	405.89	405.89	Outfit	11.61	11.61	11.61
Hull fittings	60.60	60.60	60.60	Officers, crew, and effects	10.21	10.21	10.21
Steam engineering	430.80	430.80	430.80	Stores	10.89	16.34	16.34
Reserve feed water	14.00	21.00	40.75	Fresh water (potable)	9.90	14.85	28.60
Battery	40.11	40.11	40.11	Fuel oil	150.00	225.00	375.00
Ammunition	37.15	37.15	37.15	Margin	.23	.23	.23
Ordnance stores	.67	1.00	1.00				
Equipment	32.05	32.05	32.05	Displacement	1,215.00	1,308.19	1,491.69
Equipment stores	.89	1.35	1.35				

One ton =2,240 pounds.

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
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

BATTERY.

GUNS.

(Section A–5.)

Caliber.	Location.		Gun No.
	Deck.	Frame.	
4-inch rapid-fire gun	Main	27–28 C. L.	1
Do	Bridge	75–76 P	2
Do	do	75–76 S	3
Do	do	[1] 152 C. L.	4

[1] On destroyer 296, main deck, frames 162–163.

ANTIAIRCRAFT.

3-inch antiaircraft gun	Main	[2] 164 C. L.	1

[1] On destroyer 293, bridge deck, frames 152–153.

TORPEDO TUBES.

21-inch, above water, Mark III, triple	Main	106, starboard	1
Do	do	98, port	2
Do	do	138, starboard	3
Do	do	127–128, port	4

SMALL ARMS.

	Location.	Remarks.
.30-caliber rifle, model 1903 (25)	Small-arms magazine, A–112–M	Stowed in rack.
.45-caliber Colt's automatic pistol (31)	do	Do.
Machine guns (3)	4-inch ammunition magazine A–114–M	Do.
Landing-force equipment (25)		

An emergency locker is provided on main deck at frames 75–76, port, for stowage for ready service of 10 revolvers and 10 rifles with bayonets.

BOATS.

(Section U–5.)

Name.	Number.	Carrying capacity (each).
34-foot motor sailing launch	1	19 men.
24-foot whaleboat	1	23 men.
21-foot motor dory	1	10 men.
10-foot punt	1	5 men.

LIFE RAFTS.

(Section A–7.)

Four rafts. Capacity, 25 men each.

LIST OF LOCATION OF STENCILS FOR CENTER LINES.

Stencil mark.	Location.	Level.	Frame.
6-foot W. L.	After side of bulkhead	Hold	41
Do	Forward side of bulkhead	do	49
Do	do	do	152
8-foot W. L.	do	do	12
Do	After side of bulkhead	do	55
Do	Forward side of bulkhead	do	77
Do	After side of bulkhead	do	77
Do	Forward side of bulkhead	do	99
Do	After side of bulkhead	do	137
10-foot W. L.	do	do	99
Do	Forward side of bulkhead	do	115
Do	After side of bulkhead	do	115
Do	Forward side of bulkhead	do	131
Do	do	do	164
13-foot W. L.	After side of bulkhead	Second platform	12
Do	Forward side of bulkhead	do	49
14-foot W. L.	do	First platform	164
Do	After side of bulkhead	do	164
16-foot W. L.	do	do	137
Do	Forward side of bulkhead	do	152
20-foot W. L.	After side of bulkhead	do	46
Do	Forward side of bulkhead	do	55
21-foot W. L.	do	do	12
Do	do	do	17
Do	After side of bulkhead	do	17
Do	Forward side of bulkhead	do	45
25-foot W. L.	Forward side of mast	Main deck	144
26-foot W. L.	After end of galley	do	81
28-foot W. L.	Forward end of galley	do	71½
Do	After end of chart house	do	45½
Do	Forward end of chart house	do	40
38-foot W. L.	Forward end of emergency cabin	Bridge	45½

LIST OF LOCATION OF STENCILS FOR WATER LINE.

Stencil mark.	Location.	Level.	Frame.	Remarks.
6-foot W. L.	On frame	Hold	43	Starboard.
Do	do	do	48	Do.
Do	do	do	48	Port.
13-foot W. L.	do	Second platform	49	Starboard.
Do	do	do	49	Port.
15-foot W. L.	do	First platform	165	Starboard.
Do	do	do	165	Port.
Do	do	do	172	Starboard.
Do	do	do	172	Port.
16-foot W. L.	On ceiling	do	154	Starboard.
Do	do	do	154	Port.
Do	On frame	do	163	Starboard.
Do	do	do	163	Port.
21-foot W. L.	do	do	14	Starboard.
Do	do	do	14	Port.

MACHINERY.

(*A*) *Engines.*—There are two main propelling engines of the Curtis turbine type, the forward turbines driving the port propeller shaft and the after turbines the starboard propeller shaft. Each propeller shaft is driven through a reduction gear by one main turbine for high speed, by one cruising turbine for low speed, and by one reverse turbine for backing. The cruising turbine, the main turbine, and the reverse turbine are mounted on one shaft with

the turbine pinion. This pinion is in one casing with the main gear and the two idler pinions through which the power is transmitted to the main gear. Each main gear shaft is coupled directly to its line shaft. The cruising turbine has its own casing and is on the forward end of the shaft. The main casing contains the main or high-speed turbine in the forward end and the reverse turbine in the after end.

The main turbines are designed to make 3,500 revolutions per minute, giving 452 revolutions per minute to the propellers, and developing 27,000 shaft horsepower. The cruising turbines are designed to make 1,856 revolutions per minute.

Shafts incline down and aft per frame space of 21 inches, 1.3043 inches.

Shafts diverge from center line per frame space of 21 inches, 0.9937 inch.

Center line of shaft above base line.	Frame No.	Center line of shaft from center line of ship.	Center line of shaft above base line.	Frame No.	Center line of shaft from center line of ship.
10 feet 4½ inches	99	2 feet 7 inches.	5 feet 2 15/16 inches	146	6 feet 5 23/32 inches.
8 feet 7⅜ inches	115	3 feet 10 29/32 inches.	4 feet 7⅛ inches	152	6 feet 11 21/32 inches.
6 feet 10½ inches	131	5 feet 2 13/16 inches.	2 feet 11 9/16 inches	167	8 feet 2 9/16 inches.
6 feet 4 inches	136	5 feet 7¾ inches.	2 feet 11 inches	(1)	8 feet 3 inches.
5 feet 10 25/32 inches	140	5 feet 11¼ inches.			

[1] 167+9 inches (aft).

(B) Propellers and shafts:

Diameter of propeller shafting	11½ inches.
Diameter of line shafting	11½ inches.
Diameter of axial hole in shafting	7½ inches.
Number of propellers	2.
Number of blades, each propeller (cast solid)	3.
Diameter of propellers (designed)	9 feet.
Pitch of propellers, fixed (designed)	9 feet 11 inches.
Ratio of diameter to pitch (designed)	0.908 to 1.
Area, projected (designed)	37.8 square feet.
Area, helicoidal (designed)	44.9 square feet.
Area, disk (designed)	63.62 square feet.
Lower tip of blades below bottom of keel	1 foot 6½ inches.
Tips of blades below 9 feet 4 inches W. L	1 foot 10½ inches.
Material of propellers	Comp. Mn-C.

Starboard propeller is right hand.

Port propeller is left hand.

(C) Boilers:

Kind of boiler (oil burning)	Yarrow Express.
Number (2 in each boiler room)	4.
Designed working pressure	265 pounds.
Heating surface, each boiler	6,885 square feet.
Cubical contents of combustion chamber, each boiler	800 cubic feet.
Diameter of main steam pipes	10½ inches.
Diameter of steam pipe from each boiler	8.
Number of oil burners, each boiler	12.
Number of furnaces, each boiler	1.
Smoke pipes, height above base line	47 feet 9 inches.
Number of smoke pipes	4.
Area of section through one smoke pipe	17.72 square feet.

Oil-fuel system is of the Fore River mechanical atomization type with Fore River burner (plan B–274–36–G,[1] Bu. S. E. No. 79–Q–273), with Fore River air-controlling register (plan A–274–36–F).[1]

[1] Fore River Shipbuilding Corporation, Quincy, Mass., plan numbers.