

CONFIDENTIAL

GENERAL INFORMATION BOOK

USS LAVALLETTE (DD448)

Information relative to construction and equipment and a description of electrical and other auxiliaries under the cognizance of the Bureau of Ships, Navy Department, Washington, D. C.

Data for DDE447 (Ex-DD447) included in this book are no longer applicable as this vessel is now covered by a separate volume.

RETURN TO
PUBLICATIONS
BUSHIPS

Office of
Supervisor of Shipbuilding, U.S.N.
Federal Shipbuilding and Dry Dock Company
Kearny, N. J.

1943

SECTION A-1

GENERAL

BASES OF HULL MEASUREMENTS

THE DESIGNER'S WATERLINE (D.W.L.) IS THE WATERLINE WHICH CORRESPONDS, APPROXIMATELY, TO THE DESIGNED NORMAL LOAD AND DRAFT. THE LENGTH BETWEEN PERPENDICULARS IS OBTAINED FROM THE DESIGNER'S WATERLINE. This waterline (12' 5-3/8" above the M.B.L.) is parallel to the molded base line, and is at draft 12' 6-1/2" above bottom of keel, which is the base line for draft marks.

THE MOLDED BASE LINE (M.B.L.) is located 1-1/8" above the bottom of the midship portion of the keel.

DRAFTS are measured from base line for draft marks as per plan No. 1983-28040-1A - Bureau of Ships Basic Hull No. 401462.

THE FORWARD PERPENDICULAR (F.P.) is located at the intersection of the designer's waterline and the outline of the stem.

THE AFTER PERPENDICULAR (A.P.) is located at the intersection of the designer's waterline and the outline of the stern.

THE MIDSHIP PERPENDICULAR (M.P.) is located 9" aft of Frame 105.

PROJECTIONS: BELOW BOTTOM OF KEEL

Description	Projection Below Bottom of Keel	Frame	Location Off $\varnothing$	Side
Propellers	3' 9-7/8"	200	8' 9"	Port & Stbd.
Rudder	1' 7-1/16"	203-209	0	On $\varnothing$
Rotating Supersonic Transceiver	1' 8" *	15" Fwd. of 26	18"	Port & Stbd.
Rodmeter	0' 7" *	11-7/8" Aft of 22	1'- 11-7/16"	Stbd.

* In Operating Position.

SECTION A-1

GENERAL (Cont'd.)

PRINCIPAL DIMENSIONS OF HULL

Length overall	376' 3-5/16"
Length between perpendiculars =(length on D.W.L.)	368' 11-3/4"
Extension of vessel forward of F.P.	4' 9-9/16"
Extension of vessel aft of A.P.	2' 6"
Breadth, molded, maximum	39' 4-1/2"
Breadth, outside of plating maximum	39' 7-3/4"
Depth, molded, at M.P. (9" aft of Frame 105)	23' 7-1/2"
Freeboard at bow to D.W.L.	19' 11-3/8"
Freeboard at stern to D.W.L.	9' 0-3/8"
Displacement, standard (designed)	2100 Tons
Displacement, to D.W.L.	2544 Tons
Displacement, trial (Bu.Est.)	2700 Tons

FRAME SPACING

Frames are numbered from 0 at the forward perpendiculars to 210, which is 18" Fwd. of after perpendicular.

Complete transverse frames do not exist at all of the intermediate numbered locations as the principal framing of this vessel is longitudinal.

Part frames in the forward overhang are designated as "A" and "B".

Frame spacing is 21" throughout.

DD4
448

SECTION A-1

GENERAL (Cont'd.)

HEIGHTS ABOVE DESIGNER'S WATERLINE
(WHICH IS 12 FOOT 5-3/8 INCH ABOVE M.B.L.)

CALCULATED DATA

Tons per inch immersion	25.61 Tons
Area of water plane	10760 Sq.Ft.
C.G. of water plane aft of frame 105	23.13 Feet
Moment to change trim one inch	549 Ft.Tons
C.B. above bottom of keel	7.66 Feet
C.B. aft of frame 105	7.70 Feet
Transverse metacenter above C.B.	11.42 Feet
Longitudinal Metacenter above C.B.	948 Feet
Wetted Surface	16660 Sq.Ft.
Ratio, length between perpendiculars to beam, maximum	9.30

Note: For data on stability, see Booklet of Inclining
Experiment Data and the Damage Control Book.

SECTION A-1

GENERAL (Cont'd.)

APPROXIMATE CAPACITIES

Oil fuel and diesel oil - normal load	355.37 Tons
Oil fuel - full load (95% capacity)	492.34 Tons
Diesel oil - full load (95% capacity)	40.71 Tons
Potable water (full capacity)	62.58 Tons
Reserve feed water (full capacity)	66.90 Tons

MISCELLANEOUS DATA

Inclination of propeller shafts (	
Vertical - down and aft	(Stbd. 0.52698" Per Foot
	(Port 0.83516" Per Foot
Horizontal -	0 Deg.
Area of rudder (Projected)	100.1 Sq. Ft.
Length of signal yard	21'-0"

HEIGHTS ABOVE DESIGNER'S WATERLINE
(WHICH IS 12 FOOT 5-3/8 INCH ABOVE M.B.L.)

MAIN BATTERY

5" Gun Mount No. 1	23' 10-5/8"
5" Gun Mount No. 2	29' 9-7/8"
5" Gun Mount No. 3	24' 0-3/16"
5" Gun Mount No. 4	23' 5"
5" Gun Mount No. 5	15' 10-5/8"

SECONDARY BATTERY

20 M/M Mach. Gun No. 1 - Stbd.	25' 9-1/4"
20 M/M Mach. Gun No. 2 - Port	25' 9-1/4"
20 M/M Mach. Gun No. 3 - Stbd.	13' 8-3/4"
20 M/M Mach. Gun No. 4 - Port	13' 8-3/4"
20 M/M Mach. Gun No. 5 - Stbd.	13' 6-1/8"
20 M/M Mach. Gun No. 6 - Port	13' 6-1/8"
1.1" Quadruple A.A. Mach. Gun	34' 5-5/8"

TORPEDO TUBES

Quintuple Mount No. 1 (C.L.)	22' 1-5/8"
Quintuple Mount No. 2 (C.L.)	20' 10-5/8"

SECTION A-1

GENERAL (Cont'd.)

HEIGHTS ABOVE DESIGNER'S WATERLINE (WHICH IS 12 FOOT 5-3/8 INCH ABOVE M.B.L.) (Cont'd.)

BATTERY CONTROL AND OBSERVATION FEATURES

Centerline 5" gun director		
Centerline range finder	(C.L.)	48' 8-5/8"
Centerline torpedo		
' director	(port)	36' 0-5/8"
Centerline torpedo		
director	(stbd)	36' 0-5/8"
Centerline 12" signal		
searchlight		
on Nav. Bridge	(port)	35' 0-1/2"
Centerline 12" signal		
searchlight		
on Nav. Bridge	(stbd)	35' 0-1/2"
Centerline pelorus		
on Nav. Bridge	(port)	35' 3-1/4"
Centerline pelorus		
on Nav. Bridge	(stbd)	35' 3-1/4"
Centerline radio		
director finder	(C.L.)	40' 5-1/4"
Centerline 36"		
searchlight on		
searchlight		
platform	(port)	35' 0-3/8"
Centerline 36"		
searchlight on		
searchlight		
platform	(stbd)	35' 0-3/8"
Centerline 1.1" Gun		
director	(C.L.)	38' 6-1/8"

NAVIGATION AND SIGNALING FEATURES

Top of polemast		
truck plate		80' 7-5/8"
Top of battle staff		
cap on 1.1" mach.		
gun platform		43' 8-5/8"

SECTION A-1

GENERAL (Cont'd.)

HEIGHTS ABOVE DESIGNER'S WATERLINE
(WHICH IS 12 FOOT 5-3/8 INCH ABOVE M.B.L.)
(Cont'd.)

NAVIGATION AND SIGNALING FEATURES (Cont'd.)

Top of jack staff cap main deck (Fwd.)	33' 7-1/2"
Top of ensign staff truck plate main deck (Aft)	22' 1-6/16"
Centerline of upper truck light on pole mast	81' 3-3/4"
Centerline of lower truck light on pole mast	81' 1-1/4"
Centerline of signal yard on pole mast	71' 6-5/8"
Centerline of range light on pole mast	73' 10-5/16"
Centerline of steering light on jack staff	33' 4-1/16"
Centerlight of speed light on aft range finder plat.	31' 8-7/8"
Centerline of masthead light on top of pilot house	54' 8-3/8"
Centerline of upper towing light on top of pilot house	48' 8-3/8"
Centerline of lower towing light on top of pilot house	42' 8-3/8"
Centerline of stern light on ensign staff	14' 6"
Centerline of wake light on ensign staff	13' 0"
Centerline of anchor light on ford. dressing line	40' 0"
Centerline of anchor light on ensign staff	23' 0-7/8"
Centerline of top fighting lights on pole mast (port)	75' 9-5/8"
Centerline of top fighting lights on pole mast (stbd)	75' 9-5/8"
Centerline of middle fighting lights on pole mast (port)	53' 8-1/8"
Centerline of middle fighting lights on pole mast (stbd)	53' 8-1/8"

DD445 448

SECTION A-1

GENERAL (Cont'd.)

HEIGHTS ABOVE DESIGNER'S WATERLINE
(WHICH IS 12 FOOT 5-3/8 INCH ABOVE M.B.L.)
(Cont'd.)

NAVIGATION AND SIGNALING
FEATURES (Cont'd.)

Centerline of bottom fighting lights on Nav. Bridge windshield (port)	31' 6-5/8"
Centerline of bottom fighting lights on Nav. Bridge windshield (stbd)	31' 6-5/8"
Centerline of side light on superstructure deck (port)	24' 5-1/4"
Centerline of side light on superstructure deck (stbd)	24' 5-1/4"
Blinker light on signal yard (port)	72' 2-3/8"
Blinker light on signal yard (stbd)	72' 2-3/8"
Man-overboard & breakdown light No. 1 on pole mast	68' 0-5/8"
Man-overboard & breakdown light No. 2 on pole mast	62' 0-5/8"

MISCELLANEOUS

Top of forward smoke stack	47' 0-5/8"
Top of aft smoke stack	44' 3-5/8"

SECTION A-1

GENERAL (Cont'd.)

HEIGHTS ABOVE DESIGNER'S WATERLINE
(WHICH IS 12 FOOT 5-3/8 INCH ABOVE M.B.L.)

BRIDGE AND PLATFORM HEIGHTS ABOVE WEATHER DECK
(Dimensioned to Upper Side of Plating at $\varnothing$ of Ship)

Main Deck	
F.P.	19' 6-3/8"
Main Deck	
Frame 42	15' 11"
Main Deck	
Frame 72	13' 5-5/8"
Main Deck	
Frame 137	9' 9-7/16"
Main Deck	
A.P.	9' 0-3/8"
Top of Amidship	
Deck House	
Frame 130-1/2	17' 2-5/8"
Top of After	
Deck House	
Frame 172	16' 2-1/4"
Superstructure Deck	
Frame 72	20' 6-7/8"
Superstructure Deck	
Frame 59	21' 7-7/16"
Aft Steering Level	
Frame 148	23' 3-13/16"
1.1" Machine Gun	
Platform	
Frame 148	29' 9-7/8"
1.1" Gun Director	
Platform	
Frame 148	33' 3-7/8"
Searchlight Platform	
Frame 110	30' 2-13/16"
Navigating Bridge	
Frame 74	30' 4-7/8"
Navigating Bridge	
Frame 60	29' 8-1/16"
Top Pilot House	
Frame 73	36' 9-13/16"
Top Pilot House	
Frame 58	37' 7-3/8"

DD445-448

SECTION A-1

BENCH MARKS

Bench marks for the periodic checking and alignment of navigational and ordnance equipment are provided, on suitably inscribed label plates fitted at the bases of the respective units, as follows:

Item	No. of Plates	Inscription	Deck	Frame	Side of Ship
5" Gun Mount #1	4	C.L. of Gun	Main Deck	3" Ford. Fr. 33	Ø
5" Gun Mount #2	4	C.L. of Gun	Super. Deck	10-1/2" Aft Fr. 46	Ø
5" Gun Mount #3	4	C.L. of Gun	Top of Midship Dk. House	2" Ford. Fr. 141	Ø
5" Gun Mount #4	4	C.L. of Gun	Top of Aft Deck House	Fr. 164	Ø
5" Gun Mount #5	4	C.L. of Gun	Main Deck	Fr. 179	Ø
1.1" Mach. Gun	4	C.L. of Mach. Gun	1.1" Mach. Gun Platform	Fr. 153-1/2	Ø
Torpedo Tube Mount #1	4	C.L. of Torp. Tubes	Top of Midship Dk. House	5-1/2" Ford. Fr. 101	Ø
Torpedo Tube Mount #2	4	C.L. of Torp. Tubes	Top of Midship Dk. House	Fr. 125-1/2	Ø
Port Torpedo Director	4	C.L. of Torp. Director	Nav. Bridge	8" Aft Fr. 72	13'-6" to Port
Starboard Torpedo Director	4	C.L. of Torp. Director	Nav. Bridge	8" Aft Fr. 72	13'-6" to Stbd.
1.1" Gun Director	4	C.L. of Gun Director	Gun Director Platform	3-1/2" Aft Fr. 145	Ø
Starboard Pelorus	4	C.L. of Pelorus	Nav. Bridge	9" Ford. Fr. 65	13'-7-1/2" to Stbd.

SECTION A-1

BENCH MARKS (Cont'd.)

Item	No. of Plates	Inscrip- tion	Deck	Frame	Side of Ship
Port Pelorus	4	C.L. of Pelorus	Nav. Bridge	9" Ford. Fr. 65	13'-7-1/2" to Port
Compass	4	C.L. of Compass	Nav. Bridge	Fr. 61	Ø
Standard Compass	4	C.L. of Compass	Aft Steering Level	6" Ford. Fr. 149	Ø
Stbd. 36" Search- light	4	C.L. of Search- light	Search- light Platform	9" Aft Fr. 111	9'-0" to Stbd.
Port 36" Search- light	4	C.L. of Search- light	Search- light Platform	9" Aft Fr. 111	9'-0" to Port

DD44
448

SECTION A-1

CENTERLINE AND WATERLINE PLATES

For the ready establishment of the horizontal and vertical centerlines of the ship, the intersection of these lines with various waterlines is marked, on suitably inscribed label plates fitted as follows:

Inscription	Comp't. No.	Deck	Bhd.	Side	Located on
6 ft.+ W.L.	A-1W	Hold	6	Ford.	Bhd.
5 ft.- W.L.	A-502A	Hold	18	Ford.	Bhd.
5 ft.+ W.L.	A-505M	Hold	30	Aft	Bhd.Stiff.
3 ft.+ W.L.	A-505M	Hold	42	Ford.	Bhd.Stiff.
22 ft.+ W.L.	B-1-1	Hold	72	Aft	Bhd.
20 ft.+ W.L.	B-1-1	Hold	92 $\frac{1}{2}$	Ford.	Bhd.
20 ft.+ W.L.	B-2	Hold	92 $\frac{1}{2}$	Aft	Bhd.Stiff.
20 ft.+ W.L.	B-2	Hold	110	Ford.	Bhd.Stiff.
20 ft.+ W.L.	B-3-1	Hold	110	Aft	Bhd.
19 ft.+ W.L.	B-3-1	Hold	130 $\frac{1}{2}$	Ford.	Bhd.
19 ft.+ W.L.	B-4	Hold	130 $\frac{1}{2}$	Aft	Bhd.Stiff.
18 ft.+ W.L.	B-4	Hold	148	Ford.	Bhd.
10 ft.- W.L.	C-305M	Hold	182	Ford.	Bhd.
10 ft.- W.L.	C-306M	Hold	182	Aft	Bhd.
13 ft.+ W.L.	A-1W	3rd Plat.	6	Ford.	Bhd.
12 ft.- W.L.	A-403A	3rd Plat.	18	Ford.	Bhd.
12 ft.+ W.L.	A-405C	3rd Plat.	21	Aft	Bhd.Stiff.
11 ft.+ W.L.	A-407M	3rd Plat.	30	Aft	Bhd.Stiff.
10 ft.+ W.L.	A-409M	3rd Plat.	38	Aft	Bhd.Stiff.
9 ft.+ W.L.	A-410-5E	3rd Plat.	54	Ford.	Bhd.
21 ft.+ W.L.	A-1W	2nd Plat.	6	Ford.	Bhd.
20 ft.- W.L.	A-301-4A	2nd Plat.	18	Ford.	Bhd.
18 ft.+ W.L.	A-303L	2nd Plat.	30	Aft	Bhd.Stiff.
18 ft.+ W.L.	A-304L	2nd Plat.	42	Aft	Bhd.
20 ft.+ W.L.	A-302L	2nd Plat.	18	Aft	Bhd.Stiff.
16 ft.+ W.L.	A-305-2AL	2nd Plat.	54	Aft	Bhd.Stiff.
10 ft.+ W.L.	C-301M	2nd Plat.	163 $\frac{1}{2}$	Ford.	Bhd.
10 ft.+ W.L.	C-303M	2nd Plat.	163 $\frac{1}{2}$	Aft	Bhd.Stiff.
10 ft.+ W.L.	C-304M	2nd Plat.	170	Aft	Bhd.
10 ft.- W.L.	C-305M	2nd Plat.	176	Aft	Bhd.
11 ft.- W.L.	C-306M	2nd Plat.	186	Ford.	Bhd.
12 ft.- W.L.	C-310M	2nd Plat.	196	Ford.	Bhd.
12 ft.+ W.L.	C-311A	2nd Plat.	196	Aft	Bhd.

+ Indicates Combination W.L. & C.L. Plate

- Indicates W.L. Plate

SECTION A-1

CENTERLINE AND WATERLINE PLATES (Cont'd.)

Inscription	Comp't. No.	Deck	Bhd.	Side	Located on
28 ft.+W.L.	A-201A	1st Plat.	6	Ford.	Bhd.
26 ft.- W.L.	A-202EA	1st Plat.	18	Ford.	Bhd.
26 ft.- W.L.	A-203-2L	1st Plat.	18	Aft	Bhd.
26 ft.+W.L.	A-203-2L	1st Plat.	30	Ford.	Bhd.Stiff.
26 ft.+W.L.	A-204-1LM	1st Plat.	30	Aft	Bhd.
24 ft.- W.L.	A-205L	1st Plat.	54	Ford.	Bhd.Stiff.
24 ft.- W.L.	A-206-1L	1st Plat.	54	Aft	Bhd.
24 ft.+W.L.	A-207C	1st Plat.	61	Aft	Bhd.
18 ft.- W.L.	C-203L	1st Plat.	157	Aft	Bhd.Stiff.
18 ft.+W.L.	C-203L	1st Plat.	170	Ford.	Bhd.Stiff.
18 ft.+W.L.	C-204LM	1st Plat.	170	Aft	Bhd.
10 ft.+W.L.	C-502V	1st Plat.	176	Aft	Bhd.
18 ft.+W.L.	C-204LM	1st Plat.	182	Ford.	Bhd.
18 ft.+W.L.	C-205L	1st Plat.	182	Aft	Bhd.Stiff.
18 ft.+W.L.	C-205L	1st Plat.	196	Ford.	Bhd.
18 ft.+W.L.	C-206E	1st Plat.	196	Aft	Bhd.Stiff.
18 ft.+W.L.	C-207AEL	1st Plat.	208	Aft	Bhd.
32 ft.+W.L.	Weather	Mn. Deck	42	Ford.	Bhd.
32 ft.+W.L.	A-102LAC	Mn. Deck	50	Aft	Bhd.
29 ft.+W.L.	B-104E	Mn. Deck	95	Aft	Bhd.
29 ft.+W.L.	B-107L	Mn. Deck	102	Aft	Bhd.Stiff.
28 ft.+W.L.	Weather	Mn. Deck	130 $\frac{1}{2}$	Aft	Bhd.
28 ft.+W.L.	Weather	Mn. Deck	137 $\frac{1}{2}$	Ford.	Bhd.
28 ft.+W.L.	B-111ALM	Mn. Deck	144 $\frac{1}{2}$	Aft	Bhd.
27 ft.+W.L.	B-111ALM	Mn. Deck	161	Ford.	Bhd.Stiff.
26 ft.+W.L.	Weather	Mn. Deck	172	Aft	Bhd.
41 ft.+W.L.	Weather	Super Dk.	59	Ford.	Bhd.
40 ft.+W.L.	Weather	Super Dk.	72	Aft	Bhd.
40 ft.+W.L.	Weather	Aft Deck Housetop	148	Ford.	Bhd.
40 ft.+W.L.	Weather	Aft Deck Housetop	157	Aft	Bhd.
47 ft.+W.L.	Weather	Nav. Bridge	73	Aft	Bhd.

ALSO: 30 ft. W.L. Plate on Ford. Side of Mast,
Main Deck, Fr. 74 $\frac{1}{2}$.

+ Indicates Combination W.L. & C.L. Plate
- Indicates W.L. Plate

SECTION A-1

GENERAL (Cont'd.)

PROPELLING MACHINERY

DD447

BOILERS

	Manu- facturer	Type	Designed Working Pressure
#1 Boiler			
Steam Drum - Z-24664	Babcock	Oil Fired	634#
Water Drum - Z-24681	& Wilcox	Express	
S.H. Header -		with Super-	
Inlet - 1151-52R-65		heater &	
Outlet - 1153-54R-62		Economizer	
#2 Boiler			
Steam Drum - Z-24682	Babcock	Oil Fired	634#
Water Drum - Z-24683	& Wilcox	Express	
S.H. Header -		with Super-	
Inlet - 1151-52L-13		heater &	
Outlet - 1153-54L-12		Economizer	
#3 Boiler			
Steam Drum - Z-24684	Babcock	Oil Fired	634#
Water Drum - Z-24685	& Wilcox	Express	
S.H. Header -		with Super-	
Inlet - 1151-52L-33		Heater &	
Outlet - 1153-54L-34		Economizer	
#4 Boiler			
Steam Drum - Z-24686	Babcock	Oil Fired	634#
Water Drum - Z-24687	& Wilcox	Express	
S.H. Header -		with Super-	
Inlet - 1151-52R-63		heater &	
Outlet - 1153-54R-64		Economizer	

SECTION A-1

GENERAL (Cont'd.)

PROPELLING MACHINERY (Cont'd.)

DD447

TURBINES

Turbine	Stbd. Serial Number	Port Serial Number	Manu- facturer	Number of Stages	Type of Stages	Designed R.P.M.
H.P.	50538	50545	General Electric	1 11	Cross Com- pound Curtis Rateau	5690
Cruising	50542	50537	General Electric	1 7	Curtis Rateau	4872
L.P.	50540	50541	General Electric	6	Double Flow Rateau	4792
Astern	Same casing and serial number as L.P.		General Electric	1	Curtis at ea. end of L.P. Turbine	2632

DD447 448

SECTION A-1

GENERAL (Cont'd.)

PROPELLING MACHINERY

DD448

BOILERS

	Manu- facturer	Type	Designed Working Pressure
#1 Boiler			
Steam Drum - Z-24688	Babcock	Oil Fired	634#
Water Drum - Z-24689	& Wilcox	Express	
S.H. Header		with Super-	
Inlet - 1151-52R-91		heater &	
Outlet - 1153-54R-46		Economizer	
#2 Boiler			
Steam Drum - Z-24690	Babcock	Oil Fired	634#
Water Drum - Z-24691	& Wilcox	Express	
S.H. Header -		with Super-	
Inlet - 1151-52L-37		heater &	
Outlet - 1153-54L-40		Economizer	
#3 Boiler			
Steam Drum - Z-24692	Babcock	Oil Fired	634#
Water Drum - Z-24693	& Wilcox	Express	
S.H. Header -		with Super-	
Inlet - 1151-52L-39		heater &	
Outlet - 1153-54L-38		Economizer	
#4 Boiler			
Steam Drum - Z-24694	Babcock	Oil Fired	634#
Water Drum - Z-24695	& Wilcox	Express	
S.H. Header -		with Super-	
Inlet - 1151-52R-95		heater &	
Outlet - 1153-54R-52		Economizer	

DD447 18

SECTION A-1

GENERAL (Cont'd.)

PROPELLING MACHINERY (Cont'd.)

DD448

TURBINES

Turbine	Stbd. Serial Number	Port Serial Number	Manu- facturer	Number of Stages	Type of Stages	Designed R.P.M.
H.P.	50544	50557	General Electric	1 11	Cross Com- pound Curtis Rateau	5690
Cruising	50524	50555	General Electric	1 7	Curtis Rateau	4872
L.P.	50552	50553	General Electric	6	Double Flow Rateau	4792
Astern	Same casing and serial number as L.P.		General Electric	1	Curtis at each end of L.P. Turbine	2632

DD448

SECTION A-1

GENERAL (Cont'd.)

PROPELLING MACHINERY (Cont'd.)

PROPELLERS

No.	Type	Manu- facturer	No. Blades	Dia.	Pitch	Shaft Dia.	Des. RPM	Des. Shaft H.P.
2	Solid	Cramp Brass & Iron Foundries	3	11'- 6"	12'- 1- 1/2"	16-1/2"	397	60,000 2- Shafts

Complete information and instructions concerning the propelling machinery may be obtained from the "Instruction Books for Main Propulsion Machinery", which were furnished the vessel by the contractor in accordance with the requirements of the General Specifications for Machinery.

BATTLE CONDITION

Information as to the procedure required to place the ship in Battle Condition is included in the "Damage Control Book."

SECTION A-5

ORDNANCE AND ORDNANCE OUTFIT (Cont'd.)

TORPEDO TUBES

Torpedo Tube Number	Diam- eter Torpedo	Length Torpedo	Location			From Ø of Ship	Train	
			Deck	Frame	Side		Fwd.	Aft
1 Quin- tuple	21"	24'- 1-1/16"	Top of Midship Deck House	100- 101	Ø	--	40°	40°
2 Quin- tuple	21"	24'- 1-1/16"	Top of Midship Deck House	125- 126	Ø	--	45°	45°