

SECTION 060

SHIP CHARACTERISTICS

PRINCIPAL CHARACTERISTICS:

Length Overall	180'-0"
Length, between perpendiculars	170'-0"
Beam-molded	37'-0"
Beam-molded waterline	34'-11 3/4"
Draft-mean	12'-0"
Normal trim	
Trim designed (normal)	25" by stern
Depth-molded main deck at side amidships	10'-8-1/2"
Maximum Speed	
Maximum sustained cruising speed	
Economical cruising speed (based on minimum maintenance consideration)	
Cruising radius at	
Displacement - full load	
Main propeller shaft horsepower - total	1,200 SHP
Fuel capacity @ 95%	29,211 GAL
Lubricating Oil Capacity (95%)	279 GAL
Tactical diameter at Light Load	

DISPLACEMENT

GM
Draft - forward
Aft

PROPELLERS

Diameter	8 feet 6 inches
Pitch	7 feet 0 inches
Number of blades	5

ACCOMODATIONS:

Officers -
CPO's -
Enlisted -
<u>Total</u>

LIQUID CAPACITIES

Summary - Diesel oil tanks @ 95% 1 ton D.O. @ 322 gallons/ton = 43 cu. ft.

<u>TANK</u>	<u>FRAME</u>	<u>SIDE</u>	<u>GALLONS</u>	<u>TONS</u>
4-116-1-F	116-126	S	8,380	26.025
4-116-0-F	116-126	CL	12,350	38.354
4-116-2-F	116-126	P	8,380	26.025
2-29-1-F Day Tank	29	S	101	0.314
	<u>TOTAL</u>		<u>29,211</u>	<u>90.718</u>

Summary - Fresh water tanks @ 100% 1 ton F.W. @ 269.3 gallons/ton = 36 cu. ft.

<u>TANK</u>	<u>FRAME</u>	<u>SIDE</u>	<u>GALLONS</u>	<u>TONS</u>
4-30-1-W	30-44	S	3,250	12.068
4-30-0-W	30-44	CL	10,954	40.676
4-30-2-W	30-44	P	3,250	12.068
3-140-1-W	140-147	S	3,060	11.363
4-140-0-W	140-147	CL	7,380	27.404
3-140-2-W	140-147	P	3,060	11.363
	TOTAL		30,954	114.942

Summary - Trim tanks @ 100% S.W. 1 ton S.W. @ 261.8 gallons/ton = 35 cu. ft.

<u>TANK</u>	<u>FRAME</u>	<u>SIDE</u>	<u>GALLONS</u>	<u>TONS</u>
4-FP-0-W	Stem - 9	CL	6,905	26.375
4-147-0-W	147 - Stern	CL	2,695	10.294
	TOTAL		9,600	36.669

Summary - Lube oil @ 95% 1 ton L.O. @ 292.9 gallons/ton = 39 cu. ft.

<u>TANK</u>	<u>FRAME</u>	<u>SIDE</u>	<u>GALLONS</u>	<u>TONS</u>
4-104-1-F	104-110	S	279	0.953
4-92-2-F (Waste Oil)	92-95 1/2	P	150	0.522

Summary - Hydraulic oil @ 100% 1 ton L.O. @ 288.0 gallons/ton = 38.5 cu. ft.

<u>TANK</u>	<u>FRAME</u>	<u>SIDE</u>	<u>GALLONS</u>	<u>TONS</u>
2-27-2-F	27-29	S	600	2.083

REFERENCE PLANS:

<u>PLAN NUMBER</u>	<u>TITLE</u>
76TE-0500-1	Body Plan and Table of Offsets
76TE-0500-2	Lines Plan
76TE-1107-8	Oil Pollution Abatement Tank Details
76TE-1112-41	Foundations In Machinery Space
76TE-1112-42	Foundations Outside Machinery Space
76TE-2901-7	Curves of Form
76TE-2901-22	Tank Capacity Curves
76TE-2901-23	Tank Capacity Table
76TE-5501-12	Arrangement and Diagram Fuel Oil Service System

SECTION 070

DESIGN AND CONSTRUCTION

GENERAL

The 180' WLB is a medium speed buoy tender, designed for Coast Guard duty. Service conditions, such as buoy tending, ice breaking and logistic runs have determined the arrangement of structure as well as the mechanical requirements and equipment. Vessels capable of buoy tending and ice breaking in domestic waters will be designated as "Short Range" ships. Vessels capable of buoy tending, ice breaking and logistic runs outside of the continental limits will be designated as "Long Range" ships and will have secure space facilities in lieu of the passenger stateroom on the upper deck in addition to all of the renovations of "Short Range" ships.

The authorized complement is primarily an operative complement and can perform most items of preventive maintenance of the main machinery and hull. The vessel is single screw, diesel-electric powered, capable of developing 1200 SHP.

HULL

The ship is an all welded ship. The hull plating is conventionally straked with a mix of flush and lap seams and butts. The "E" strake, which straddles the second deck is of 30.6#/SF (3/4" thickness) plating. The bow and stern plating are of the same thickness. Fabricated steel plate bilge keels are fitted to the shell between frame 62 and 100 Port and Starboard. The center vertical keel is a fabricated one of 20.4#/SF flat keel, 15.3#/SF vertical keel plate, and 30.6#/SF rider plate with 1/4" X 3" flat bar stiffeners at 24" spacing center to center; the keel is parallel to the ship's baseline. Fabricated steel plate keelsons are fitted port and starboard; with inner keelson extending from frame 44 to 140, and the outer keelsons extending from frame 16 to 116.

Ten (10) watertight bulkheads extending from the bottom shell to the underside of the main deck divide the ship longitudinally into eleven (11) watertight sub-divisions. Fabricated shell plate web frames are spaced between the watertight bulkheads on six (6) foot centers, and extend from the bottom shell to the underside of the 01 deck. Structural steel tee bars function to stiffen shell plating and bulkhead panels from the baseline to the main deck.

The main deck has sheer, no camber and is continuous from stem to stern. The second deck has sheer no camber and extends aft from FR 9 to FR 92, structural partial decks or grating levels are provided from FR 92 to FR 140. Hold areas are provided with portable deck plates with suitable supports. There is a raised forecastle deck forward, with sheer and camber, an open main deck area (Buoy Deck) with a raised fabricated steel plate bulwark rail, and a superstructure deck house aft of the buoy deck rises to 01, 02 and 03 deck levels (all with sheer and camber) providing deck area for boat stowage and ship control areas.

Specific information relative to shell plating or internal structure may be obtained by referring to plans listed in this portion or Section 085.

REFERENCES:

PLAN NUMBER

TITLE

76TE-0500-1

Buoy Plan and Table of Offsets

76TE-1101-1

Shell Expansion

76TE-1104-1

Center Vertical Keel and Keelsons