ALUMINUM-DECKED TUB FLOTATION DOCK SPECIFICATIONS

I. GENERAL REQUIREMENTS

These specifications are for a fully CAD designed and engineered Aluminum Decked Tub Flotation dock system and are the minimum standards for design and fabrication. The dock system shall be designed and manufactured by HALLSTEN CORPORATION, P. O. Box 41036, Sacramento, CA 95841, (800) 473-7440.

II. ENGINEERING

A. Freeboard

Dock flotation shall be designed to support the dead weight of the complete dock, including any permanently attached accessories, plus an additional live load of 20 pounds per square foot over the entire dock area. Flotation material shall be distributed as widely as possible under the dock for maximum stability. Minimum freeboard under combined dead and live load shall not be less than 8 inches. Freeboard under dead load only shall be between 16 and 22 inches.

B. Factors of Safety

The deck and structural components shall be designed with minimum safety factors on working stresses, which conform to those specified in the American Association Design Manual specification for aluminum structures, as applicable.

C. Vertical Design Loads

The dock structure and deck shall include the dead weight of the dock components as well as a vertical distributed live load of 20 pounds per square foot of dock area. The deck and structural components shall also be designed to support the dead load plus a concentrated vertical live load of 400 pounds applied over a 6" x 6" area located anywhere on the deck surface. The distributed and concentrated live loads need not be applied simultaneously.

D. Horizontal Design Loads

The dock structure and deck shall be designed for a lateral load of 150 pounds per foot of length to account for wind and water currents.

E. Connections Between Dock Modules

Connecting hardware (hinges) and its attachments between any adjacent dock modules shall be designed to support a bending moment in the horizontal plane of 3,000 foot-pounds.

III. MATERIALS

A. DECKING

Decking shall be aluminum deck slat 6 "wide by 1.61" deep produced from alloy 6061 - T6 with ribbed non-skid surface. The deck slats shall interlocking top and bottom with rolled interlocks which causes the slats to act together when loaded. The ends of the deck slats interlock into the structural frame and are retained without welding. After installation, the decking shall be given an AA-M44 (course matte) finished to increase skid resistance, reduce glare, and give a uniform appearance.

B. Dock Fenders/Bumpers

Fenders shall be solid "Select Lumber" High Density Recycled Polyethylene lumber, 2" x 8" nominal measure. The material shall be Gray in color and contain ultraviolet stabilizers to resist weathering and surface degradation. The fender shall be counterbored and bolted to the dock sides on all exposed surfaces. The fender shall have no wood or wood product content.

C. Bolts & Fasteners

Bolts shall be American standard regular with hexagonal or oval heads and nuts, and shall be hot-dipped galvanized in accordance with ASTM A153.

D. Flotation Tubs

The buoyant units of the docks shall be polyethylene tubs having a wall thickness of .150 nominal. The tubs shall conform to ASTM D1248 and shall be manufactured in such a way as to be resistant to UV radiation from sunlight for 20 years. The tubs shall be rotationally molded, complete, in one piece and completely filled with polystyrene foam. The foam shall be cast within the tub and produced with no voids. The foam shall have a minimum density, in place, of 0.9 pounds per cubic foot and a maximum density of 1.2 pounds per cubic foot. The tub shall be produced with structural ribs, top, bottom and sides and with heavy mounting flanges on sides and ends.

E. Mooring Cleats

Mooring cleats shall be located as shown on the contract drawings and attached using galvanized steel through bolts. The cleats shall be, as a minimum, the dimensions shown on the drawings, be fabricated steel, galvanized after fabrication, and shall be sufficient to withstand a static of 500 pounds in any direction, applied to a rope secured to the cleat.

IV. FABRICATION & WORKMANSHIP

A. Workmanship

The quality of workmanship shall be equal to the best general practice in modern structural fabrication shops.

B. Experience

The fabricator must be able to furnish adequate evidence of a minimum of 5 years of ongoing successful experience in fabricating aluminum dock structures, and shows that all workmen employed in dock fabrication are properly experienced and skilled in the work they are called upon to perform.