

Marinas use award-winning ladder to solve safety and corrosion issues

by **Dan Robinson**

In some parts of the country, building code requirements mandate 24/7 access to docks from the water, meaning many marinas need ladders that are always available in case someone falls into the water.

These requirements are not uniform across the country. While some municipalities and counties require 24/7 access, some insurance liability carriers make it mandatory to have emergency access ladders at the facilities they insure. Even at marinas where a 24/7 access rule is not formally in place, customer safety benefits from emergency access to the docks at all times.

While most dock ladders can address emergency access issues, many traditional ladders also cause problems for marinas. Any wood or metal structure that stays in the water runs the risk of accumulating marine growth, which can harm the function of the ladder or the feet of those that use it. Marinas must spend time and labor to clean barnacles and other marine growth off ladders.

To address these safety issues, Atlantic Aluminum & Marine Products (AA&M), based in Lantana, Fla., developed the FloatStep® Ladder, and the design won an Innovation Award at the Marine Aftermarket Accessories Trade Show in 2007 from the National Marine Manufacturers Association (NMMA) and the Boating Writers International (BWI). (Please see the chart below for FloatStep® Ladder specifications.)

Safety

After a complete rehabilitation of Palm Harbor Marina in West Palm Beach, Fla., John Smundin, marina manager, installed FloatStep® Ladders throughout his marina to increase customer safety from slippery marine slime on the steps or cuts and infections on bare feet from tough barnacles and other marine growth.

To ensure safe ladders before, Palm Harbor had to routinely clean barnacles. "This ladder appealed to me because it's out of the water," Smundin said. "Any time you get a barnacle on the ladder, you run the risk of someone getting cut."

Before the FloatStep® Ladder, the only way to prevent marine growth was to pull the ladder up and



Palm Harbor Marina in West Palm Beach, Fla., installed 20 FloatStep® Ladders on its floating concrete docks.

lock it in a raised position or install a "flip-up" ladder that folded up on the dock. The FloatStep® Ladder is automatically stored completely out of the water; a plastic float pushes all of the ladder components out of the water when it's not in use, leaving only the plastic float on the bottom step in the water. The sliding ladder can be pulled down from the water and easily accessed.

Installation

Typically, marinas can choose between four lag or through bolts for installation on any docks. Marinas with wood docks can use traditional dock ladder bolts for attaching the ladder.

Two dock manufacturers, Technomarine and EZ Dock, also offer the ladders with their docking systems. EZ Dock includes special hardware connections to attach the ladders to its polyethylene dock system. The attachment hardware connects the ladder using the proprietary pocket couplers along the entire length of the dock.

Technomarine can easily incorporate the FloatStep® Ladder into its aluminum dock systems. It also takes advantage of the track system used for all other accessories on its docks, allowing the ladder to slide along on the entire dock system. T-bolts, which are provided with the ladder, can secure it anywhere on the dock, without the need for any anchoring holes in the dock.

For those installations that include seasonal use of the ladder, it can be removed easily, while leaving the hoop base on the dock or the ladder can be temporarily "pinned" in the up position, which keeps the ladder completely out of the water, including the float.

In early 2010, Palm Harbor Marina installed 20 FloatStep ladders throughout its concrete floating docks, which support 190 slips. Jeff Tellex, the inventor of the FloatStep® Ladder at AA&M, installed the ladders at Palm Harbor Marina with zero disruptions to marina business. The ladders were bolted into the recycled plastic beam that bolted to the concrete with a bracket against the concrete face of the dock into the whaler. "It seemed to be very simple," said Smundin of the work, which took only about one week.

Quick look: FloatStep® Ladder specs

- works on fixed or floating docks or bulkheads
- 350 lb. maximum weight capacity
- available in 3 to 8 step lengths
- fabricated with industry standard 6000 series aluminum
- the float, with "buoyancy control," is made from high density plastic
- seven year warranty on fabrication; one year on float and bushings

Maintenance

Smundin said at his marina, the bottom float step of the ladders, which remains in the water, does get some barnacle growth. Even if those eventually need to be replaced, Smundin knows he will get more life out of the FloatStep® Ladders, than the standard fixed aluminum ladders the marina had before.

On a routine basis, Smundin said the marina checks the mounting and makes sure the bolts are tight, but it has seen no major maintenance issues.

The most common material used in the past for ladders was wood or metal, which did not last long in the water. With the advancements made to marine aluminum, this material has become the standard; however, even marine aluminum left in the water can suffer from corrosion due to the saltwater environment and electrolysis. The FloatStep® Ladders can rid marinas of the normal maintenance activities associated with traditional ladders that stay in the water.

Location

Because Palm Harbor Marina has floating docks with large pilings on the end of the finger piers, the ladders were installed on the side of the finger pier, next to the piling.

At the City of West Palm Beach in Florida, the municipal marina has three docks and 7 FloatStep® Ladders, which were installed as part of a waterfront reconstruction in 2008.

The tides and waves fluctuate the floating docks at the West Palm Beach marina, and, “All that movement tends to loosen the bolts a bit,” said Greg Mihalko, parks & recreation operations coordinator for the City of West Palm Beach.

It’s still a much quicker fix to tighten bolts occasionally, as opposed to scrape barnacles and marine growth. “They solved that problem,” Smundin said.

The current location of the ladders has caused some problems for boaters. “Either they’re hitting them when they’re docking or not putting bumpers out correctly,” said Mihalko. “They’re crushing the handrails up against the main frame, making them [the handrails] unusable.” Mihalko suggested a design change to put braces on each side of the handrails, but he also noted, it doesn’t seem to damage the ladder, in terms of its ability to slide up and down.

AA&M suggested locating ladders near pilings, so the piling and piling bracket could provide some protection from boaters hitting the ladders. The other solution may be the new lower profile ladder, which has a smaller dimension. AA&M will introduce the new ladder this spring.

Dan Robinson is general manager at Mid-Atlantic Docks in Seaville, N.J., who is responsible for marketing the FloatStep® Ladder, manufactured by Atlantic Aluminum & Marine Products. For additional information, contact Dan on the phone at 609/432-7878, or