

CASE STUDY

TALL SHIP PLACES TALL ORDER FOR PLUMBING ALTERNATIVE

Philadelphia Ship Preservation Guild *Philadelphia, PA*

Philadelphia Ship Preservation Guild Chooses FlowGuard Gold® CPVC Plumbing Systems to Stand Up to Corrosive Sea Water and Eliminate Fire Risk

As a result of limited space and the absence of modern-day plumbing systems, the selection of an appropriate plumbing material was not a priority in 1883 during the construction of the Gazela, the oldest wooden Barkentine ship still sailing today.

More than 100 years later, things have changed greatly on board the historic Gazela. Today, it is owned and operated by the Philadelphia Ship Preservation Guild and serves as an international goodwill ambassador for the Port of Philadelphia and Camden.



It has undergone major restorations in 1901, 1957 and during the early 1990s. January 2001 marked the beginning of the most recent and comprehensive overhaul, which included a brand new deck, rewiring of the electrical systems, and all new plumbing, including new holding tanks.

"You face a number of distinct challenges when evaluating an appropriate plumbing material for such a historic project," explained Ed Walsh, the ship's chief engineer who has worked in the plumbing field for more than 15 years. Currently a purchasing agent for a

Philadelphia-based mechanical contracting firm, Walsh was assigned the task of both recommending and installing a plumbing system that could endure the harsh demands of a marine environment.

"Copper wasn't even a consideration for us for a number of reasons," noted Walsh. "First and most obvious is the fact that it would corrode in a short period of time under these types of demanding conditions. But even more risky is the fire hazard it represents. The combination of a wooden ship and a torch isn't a good idea. We've got pipe running right next to wood. There's no way we could chance the installation of copper since it requires a torch."

With copper ruled out, Walsh turned his focus to plastic and started researching options.

"I asked a lot of questions and raised a lot of issues," said Walsh. "In the end, I decided that FlowGuard Gold® pipe and fittings were the best products for the job. They are safer to install than copper. And they're less expensive, which is important when you're in a non-profit organization. I also think they're more user-friendly. When you travel as much as we do, you really need a product that's readily available and offers fast, easy installation."

Walsh continued, "I especially liked the tapered sockets which provided a better joint since excess solvent cement was less likely to be pushed into the fittings. Cutting and joining are fast and easy, and the special solvent cement forms a bond within minutes."

As for durability, Walsh expects the CPVC system to outlast any of the other alternatives he evaluated, including other plastics and copper. "We will not have any problems with pitting or corrosion with FlowGuard Gold® CPVC pipe and fittings."

Walsh concluded, "There just didn't seem to be a better product for the job. This is a unique project that required a unique product, and the FlowGuard Gold® system exceeded all of our requirements."

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Type of Construction:
Rehabilitation Project

Installation Type:
Repipe

FLOWGUARD GOLD®
PIPE & FITTINGS
NOT A DROP OF DOUBT.



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About the Guild and the Gazela

The Philadelphia Ship Preservation Guild is a non-profit, educational organization dedicated to acquiring, restoring, preserving, maintaining and operating unique boats and ships to acceptable maritime standards of seaworthiness and historical accuracy.



The 100+ year old Gazela is the last of a strong breed of Portuguese-built wooden square-riggers. She was used for cross-Atlantic fishing expeditions to the Canadian Grand Banks where her hull was filled with cod. In 1969, she was retired as a result of the economic, political and ecological changes affecting the fisheries of Portugal and Greenland.

On May 22, 1971, through the contributions of a Philadelphia philanthropist, the Gazela was transferred to American ownership and set out to trace Columbus' infamous route to her new American home.

Each summer, Gazela sails the eastern seaboard with professional officers and a volunteer crew, serving as a living museum for thousands of visitors. Often in the company of other tall ships, she sails from Newfoundland to New Orleans and even the Caribbean.

Complete renovation of the 177-foot tall ship was completed in time for a 2003 rededication. Work was completed by professional shipwrights and a volunteer crew with generous contributions coming from unions, foundations, shipyards, suppliers, government offices and private individuals.

Contacts

For more information about the itinerary of the Gazela, contact The Philadelphia Ship Preservation Guild at 1-215-218-0110.

Since Lubrizol's development of CPVC plumbing systems over 45 years ago, more than three (3) billion feet of CPVC pipe has been installed in homes, condominiums, buildings, apartments and hotels, including twelve (12) million homes. For more information on the FlowGuard Gold® plumbing system, including pipes, valves, joining cement, caulks, sealants and tools, call 1-888-234-2436, X7393, or visit www.flowguardgold.com.

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