



Case Study: **New Jersey Naval Museum**

Damn the Torpedoes! Full Speed Ahead!



USS Ling World War II submersible gets a **new fire protection system.**

Sitting along the Hackensack River is the New Jersey Naval Museum, a place where collections of missiles, torpedoes, cannons, battle flags, ship models and photographs can be experienced. The museum is also home to the World War II submersible USS Ling SS-297. Restored to its 1945 appearance, the USS Ling is over 300 feet long, and it has floated in a quiet corner of the Hackensack River since the early 1970s. Old maps and Life magazines litter the officers' quarters; plastic vegetables and a bowl of yarn spaghetti liven up the crew galley.

Part of the Ling's restoration involved getting it up to the current fire and life safety code, so that it could continue to host visitors, tours and parties, such as those for cub scouts and boy scouts. Although USS Ling was originally equipped with interconnected high-voltage smoke alarms, the local fire department determined that an actual fire alarm system needed to be installed.

This prompted the retired veterans who operate the museum to reach out to a few fire and life safety companies for their expertise.

Project:

Naval Museum

New Jersey, NJ

27



ASD-PL2F - Photo Smoke

8



PC2R - Horn Strobes

1



P2R - Horn Strobe

1



P2RK - Outdoor Horn Strobe



“When we evaluated what the fire alarm system would entail, besides the monetary estimate, we took into consideration that these veterans gave their service to our country and are now educating people that come through the submarine about what it is to work on a submarine, which has historical significance,” explains Joseph F. Cioffi III, vice president of Bergen Protective Systems, Inc. in Englewood Cliffs, NJ. “We wanted to do something to help them out and take part in giving back, by donating the fire alarm system. This included all equipment and the installation itself.”

Since the Hackensack fire official categorized the USS Ling as a “windowless basement,” the proposed fire alarm system had to meet those particular requirements.

“We were concerned with two things,” he explains. “One was the very thick steel. Installing on a steel structure, especially one such as this, can be challenging.” Cioffi says the other concern was not wanting to cause damage to the sub. “They actually helped us make the right holes throughout the submarine, as well as weld the necessary supports for the devices,” he says. “They gave us the assurance needed to install the cabling and everything that we needed to install the system. They were extremely helpful in participating in the installation, from making holes throughout the compartments to the actual welding. Many of these veterans were also experienced tradesmen, so that expertise was invaluable throughout the whole installation.”

“We are honored and privileged to be able to work with the veterans and give them a fire alarm system that will serve their needs.”

— **Joseph F. Cioffi III**, Vice President of Bergen Protective Systems, Inc.

Consulting with the Hackensack fire official, Cioffi and the Bergen Protective Systems team created a design and fire alarm system layout based on their site survey. “That was the easy part,” says Cioffi. “The real challenge was the installation. Apart from the fact that it was a unique environment to work in-- very compact areas with a lot of pipes and obstructions -- the system installation was very difficult because it was hard to find places to mount the necessary devices. The steel structure pushed us to be creative with mounting options.”

Bergen enlisted the expertise of the retired veterans for knowing where it was appropriate to drill through the sub’s steel structure, as well as fabricating steel mounting supports for the devices – which were actually welded to the structure in the different compartments. This information was pivotal for Bergen to maintain the structure’s integrity, while running the system wiring and mounting the smoke detectors, as well as the horn strobes.

The system, comprised of a Gamewell-FCI by Honeywell 7100 analog addressable fire alarm control panel, with System Sensor notification appliance devices, including horn strobes and addressable smoke detectors, all met the requirements. The panel resides in a torpedo room compartment.

“We continue to donate our time to monitor, service, inspect and test the system,” Cioffi says. “We are honored and privileged to be able to work with the veterans and give them a fire alarm system that will serve their needs. The added honor is that this combined effort was recognized by the members of the New Jersey Electronic Security Association, when we were the recipient of the 2013 Life Safety Installation of the Year award. It was a terrific achievement for all of our personnel who worked so hard on this challenging installation for the museum.”



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