

## Background

In the shipyard industry, dry docks require pipelines to carry multiple services to the waterfront, including potable water, oxygen, propane gas, CO<sub>2</sub>, wastewater, and compressed air. In 1997, a dry dock company in Florida was experiencing corrosion problems on one of its critical stainless steel CO<sub>2</sub> pipelines at their waterfront docking location. Asahi/America's Air-Pro® compressed air piping system was installed by the owner as the solution. As of 2020, this installation still provides trouble-free service. This piping system is located outdoors, exposed to the sun, and in a marine salt-air environment.



## Problem

In 1998, a dry dock company located in northern Florida built a new 600-foot-long pier, which included all ship construction service pipelines for maintenance purposes. The company did not want the same metal pipe corrosion issues on the new pier they had experienced the year before.

## Solution

Given the success of the previous Air-Pro® installation from 1998, the company decided to use Air-Pro® on the new pier for their potable water, CO<sub>2</sub> and compressed air pipelines.

In 2019, some of the metal-flanged Teflon bellows expansion joints, installed every 50 feet on the 4" Air-

Pro® compressed air lines, started to rust. The corrosion became so severe that the dry dock company began experiencing failures at several points in the pipeline. The plant tried to repair this with a mechanical sealed metal sleeve, but this failed.

An entire side of the pier's compressed air system went down, which forced the company to run temporary hoses from across the pier to provide air to the other side. In need of a better solution, the company contacted Asahi/America for help. Asahi visited the facility and proposed to repair the failed sections with Air-Pro®.

Asahi/America's 4" electrofusion couplings were installed, along with new Air-Pro® pipe to repair

and replace the missing section. Because the 23-year-old Air-Pro® piping system was still functioning properly – free of leaks, corrosion, or failures – they were able to successfully weld the new Air-Pro® piping and 4" electrofusion couplings to the old Air-Pro® pipe in the trench.

Today, the plant is very happy that their compressed air system on the pier is still in service, and that they now have an easy solution if repairs are needed in the future – especially in the trenches where there is little room to operate.

## Other Asahi Pipe Offerings

Visit our website at [www.asahi-america.com](http://www.asahi-america.com) to view other piping systems options.

## Air-Pro® Compressed Air Piping System

### Features and Benefits

- Increased compressor efficiency due to low friction
- Thermal fusion is more reliable than welded, soldered or mechanical joints
- Lightweight materials reduce transportation costs
- Wide temperature range (-40°F to 140°F)
- Excellent chemical resistance
- High pressure capacity (230psi at 68°F)
- Ideally suited for horizontal directional drilling and underground buried applications
- Compatible with all compressor lubricants



**AIR-PRO®**  
Compressed Air Piping

### Pipe and Fittings

- 20 - 110mm (1/2" - 4") SDR 7.4, 230psi
- 160 - 315mm (6" - 12") SDR 11, 150psi

### Valves

- Ball valves
- Tapping saddles

### Seals and O-Rings

- FKM

### Ideal Applications

- Compressed air

### Welding Methods



### Asahi Advantage

- Low-cost maintenance and installation
- Leak-free performance
- Butt, socket or electrofusion joining methods
- Start-to-finish project assistance from specification, weld training and installation

## Air-Pro® Compressed Air Piping System

Developed in 1992, Air-Pro® piping system has been installed with confidence for over 25 years in industries as varied as shipyard, hospitals and railroad yards. Air-Pro® revolutionized the use of thermoplastics for air transport. Unlike PVC systems, Air-Pro® meets the requirements set by California OSHA Unfired Pressure Vessel Safety Order 462 (m) (3).

Engineers and designers continue to exclusively specify Air-Pro® due to its reliability, large size range, ease-of-installation and low cost-of-ownership. Air-Pro® includes all necessary adapters to transition from existing, failing metal or ABS systems.