Aquaculture Case Study



Background

Abalone is considered a seafood delicacy in many countries. When raised on an aquaculture farm, they receive a constant supply of pure, cold, nutrient-rich seawater they require via life support systems consisting of valves and long runs of pipe. The valves are used for shut-off purposes for the abalone's holding tanks, life support filtering beds, and the associated feeding pipelines. Properly working valves and pipelines are crucial for survival in a life support system. Contaminants from corrosion in a farm's life support system can be detrimental to the growing abalone. One aquaculture farm solved corrosion problems in their feed lines by replacing their existing metallic valves with Asahi/America's Type-57LIS butterfly valves.



Problem

While abalone may thrive in saltwater, it's a harsh environment for metallic valves. A western US aquaculture farm was experiencing widespread issues in their pipelines due to corrosion. The metallic butterfly valves were seizing; their stems shearing; and handles and discs breaking. Rust particles were traveling in the pipelines, constantly causing contamination and blockages in the saltwater feed lines.



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Solution

Asahi/America's Type-57LIS butterfly valve was the ideal solution for replacing the corroded metallic butterfly valves because both valves have identical face-to-face dimensions. Installing the Type-57LIS in place of metallic valves can be done without any modification to the existing piping system. The abalone farm originally installed a 6" PVC/EPDM Type-57LIS butterfly valve

to test the durability of the valves. After six months, they were pleased with the functionality and corrosion resistance of the valve in their tank application.

With the results they experienced during the test period, the abalone farm purchased nearly 70 6" and 8" Type-57LIS butterfly valves to replace all of the corroded metallic butterfly valves throughout the farm.

This decision was based on the ability to directly replace the valves without shutting down the facility and no rework required on the existing pipelines.

The farm has since retrofitted nearly a third of the Asahi butterfly valves with pneumatic actuators to ease operation at the facility, which will aid in their efforts to upgrade and expand production for their worldwide customer base.



Asahi Advantage

- Low-cost maintenance and installation
- Leak-free performance
- Corrosion resistance
- Start-to-finish project assistance including specification, weld training and installation

Other Asahi Offerings

Visit our website at www.asahi-america.com to view other thermoplastic valve and piping system options.

Another Corrosion Problem Solved.™

Applied Products



Type-57LIS Butterfly Valve



Sizes

Lever or Gear: 3" - 8"

Models

- · Wafer style
- Lug style with 316 stainless steel lug inserts

Operators

- Lever
- Plasgear[™]

Bodies

PVC

Discs

- PVC
- PP
- PVDF

Seats/ Seals

- EPDM
- FKM
- Nitrile

Stems

316 stainless steel



Standard Features

- Direct replacement for metal valves conforming to ISO 5752 short face-to-face dimensions
- Standard model has PVC body with PP disc for superior chemical and corrosion resistance as well as elevated temperature capabilities
- Non-wetted 316 stainless steel stem has full engagement over the entire length of the disc and is totally isolated from the media
- Can be pneumatically or electrically actuated

Type-57LIS butterfly valve as direct replacement for metal valves

The Type-57LIS butterfly valve is well suited for a wide variety of life support applications. The Type-57LIS butterfly valve conforms to ISO-5752 short pattern face-to-face dimensions. This allows the Type-57LIS to directly replace metal valves conforming to the same standard. Available in ANSI B16.5 wafer or ANSI lug models with 316 stainless steel drop-in lug inserts. The Type-57LIS butterfly valve can be pneumatically or electrically actuated.

