

Background

Applications in mining are challenging because mining facilities are located mostly in harsh environments with high altitude, high or low temperatures and acid mist. Additionally, mining processes handle corrosive fluid, such as sulfuric acid. Asahi/America's corrosion resistant thermoplastic valves, actuators and piping system products have performed under these difficult conditions for more than four decades in mines around the world.



Problem

A major copper mining company in the US was constructing a new drain header from the solvent extraction/electro-winning (SX/EW) plant. The drain pipe typically uses HDPE, but HDPE valves are not commercially available to handle these applications. The copper is plated onto stainless steel sheets to a desired thickness through the SX/EW process. After, the 99+% copper is broken off the sheets to go to further refining processes and used for wires, pipes or sold as raw material.

Solution

The customer selected Asahi/America's industrial valves because they needed valves that would perform in the mine's harsh conditions. The copper mine installed over 300 Type-21 ball

valves and over 100 Type-57 butterfly valves in their new electro-winning system. Thermoplastic ball valves' corrosion resistant properties make it the ideal valve to handle the harsh copper sulfate solution present in the electro-winning process. Thermoplastic butterfly valves are well suited to this application and are often used because of their lightweight properties. A thermoplastic butterfly valve weighs considerably less than its metal counterpart. The weight differences were very important during the transport and installation of the product.

Although thermoplastic valves are lightweight, they are not fragile. Materials such as PVC, CPVC, PP, and PVDF are used to provide ruggedness as well as corrosion resistance in valves designed to fill Schedule 80 piping requirements.

Asahi Advantage

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

Ideal Applications

- Heap leach irrigation system
- Solvent extraction and electro-winning (SX/EW)

Other Asahi Offerings

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

Type-21 Ball Valves



Certified to
NSF/ANSI 61-G

*PVC (EPDM/FKM) models

Standard Features

- Pressure rated up to 230psi (PVC, CPVC, PVDF), 150psi flanged models
- True union design for easier installation or repairs without expanding the pipe system

Sizes

- 1/2" - 4"

Bodies

- PVC, CPVC, PP, and PVDF

Seats

- PTFE backed with EPDM or FKM

Models

- PVC & CPVC: socket, threaded and flanged (ANSI)
- PP & PVDF: IPS and Metric (DIN) socket, threaded, butt, and flanged

Type-57P Butterfly Valves



Certified to
NSF/ANSI 61-G

*PVC/ PP (EPDM) models

Standard Features

- 316 stainless steel stem with full disc engagement
- Full seat design eliminates gaskets
- Highly visible 0° full closed to 90° full open position indicator or Plasgear[™] operator

Sizes

- 1 1/2" - 14"

Bodies

- PVC, CPVC, PP, and PVDF

Seats/ Seals

- EPDM
- FKM
- Nitrile

Models

- Lug
- Wafer style

Thermoplastic Ball and Butterfly Valves

Asahi/America's thermoplastic valves provide a dependable and economical way to handle corrosive chemicals, including sulfuric and hydrofluoric acid, nitric acid, oxidizing chemicals, caustics, solvents, halogens, and various other hostile fluids. They perform at temperatures up to 250°F, pressures up to 230psi, and flows up to 18,500 gpm. All valves meet or exceed ANSI Class 6 shut-off.



**Another
Corrosion
Problem
Solved.[™]**