



# Application Story

Another  
Corrosion  
Problem  
Solved.™

## Mining - Copper Electro-Winning

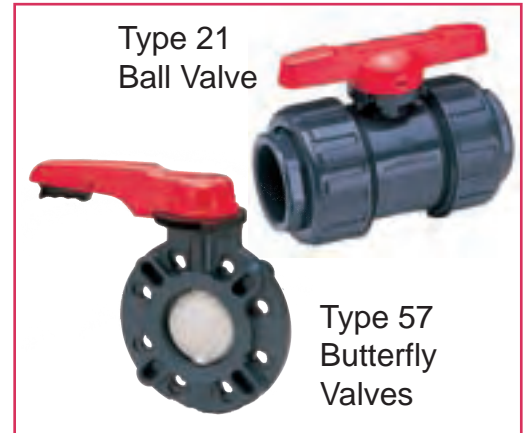
### Products Installed:

- Type 21 Flanged Ball Valves
- Type 57 & 75 Butterfly Valves

### Application:

**Liquid:** Copper Sulfate Solution      Concentration: Low Sulfuric  
(Sulfuric Acid + Copper)  
used in the Electro-Winning Process

**Temperature:** 105 F      **Pressure:** 25-50 psi



A Major Copper Mining Company in the United States was constructing a new Drain Header from the SXEW Plant. The drain pipe is typically HDPE with PVC or CPVC Flange X Socket valves depending on operating temperature. This is basically a copper plating application where they plate copper on to stainless steel sheets to a desired thickness and then break off the slabs/plates of copper from the sheets which will be reused. The copper "slab" is 99+% pure at that point where it will go to another plant for further processing into rod, wire, etc... or sold on the open market as is. Asahi/America offered the perfect solution.

The copper mine installed over 300 Type 21 Ball Valves and over 100 butterfly valves in their new Electro-winning system.



Thermoplastic butterfly valves are well suited to this application and are often used because of their light weight. A thermoplastic butterfly valve weighs considerably less than its metal counterpart. The weight differences become very important during the transport and installation of sprinkler lines.

Thermoplastic ball valves corrosion resistant properties makes it the ideal valve to handle the harsh copper sulfate solution present in the Electro-winning process.

The fact that thermoplastic valves provide light weight does not connote fragility. Materials such as PVC (polyvinylchloride), CPVC (chlorinated polyvinyl chloride), PP (polypropylene), and PVDF (polyvinylidene fluoride) are used to provide ruggedness as well as corrosion resistance in valves designed to full Schedule 80 piping requirements.

Copper Ore

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