

# A Tough System for a Tough Job

## KEEPING DRY UNDER DIFFICULT CIRCUMSTANCES

Mitsubishi Mining Company in Lucerne Valley California had a big problem. The storage silos for their finished cement products had leaks. Water seepage into almost any material is not good and for Mitsubishi it was a huge problem. The leaking water made the powdered cement turn into hardened rock.

In one of the storage silos they were getting a lot of chunks of cement rock. Upon further investigation they found that they had pieces of cement as big as cars inside. They were so big that dynamite and jackhammers were used inside the silo to break them down into smaller pieces before they could be removed

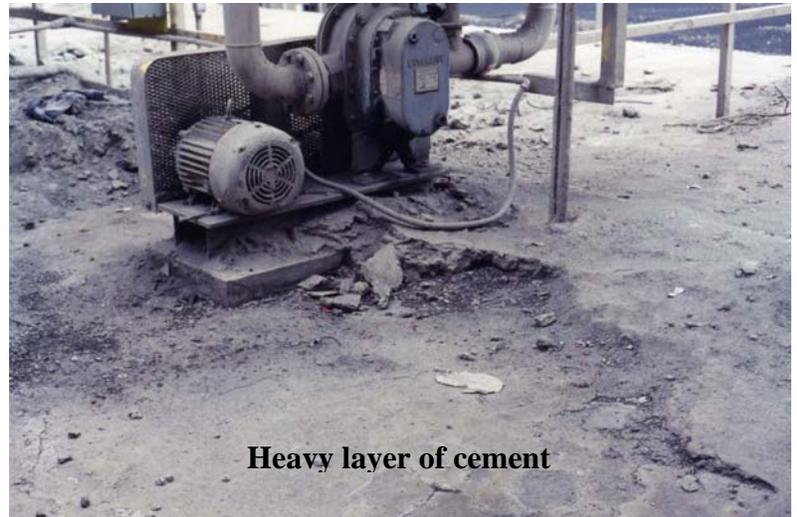
This cost a lot of money as well as down time. They needed a solution that would stop the leaks and also stand up to the harsh environment of the hot desert and mining conditions.

## Rubberized Emulsion & Polyester

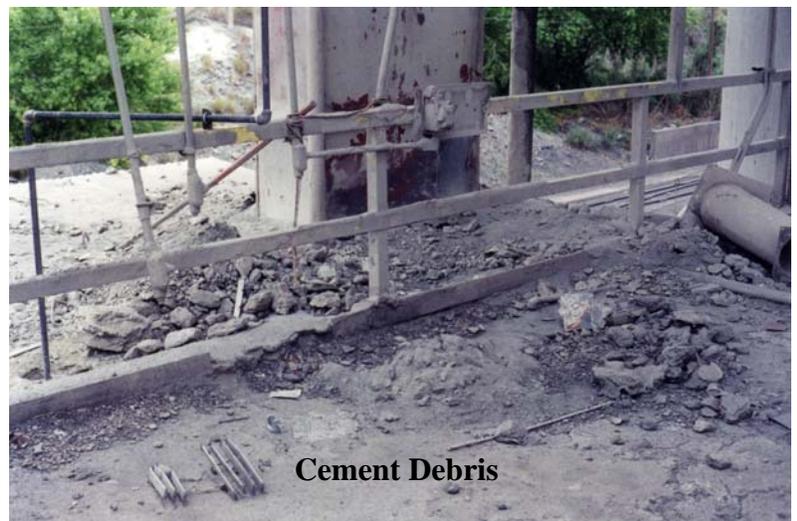
Century Roofing introduced them to a tough waterproofing system that could take the abuse that was dished out from the mining operation as well as the harsh desert climate and continue to stay watertight. The system uses Energy Seal's Acu-Fabric and a final layer of white Acu-Shield coating and a rubberized emulsion,

On top of the storage silos a large layer of cement built up over the years. This had to be removed before waterproofing the deck. Jackhammers were used on the larger pieces of cement and needle guns and grinders removed the material off of the roof deck, perimeter and equipment...a very expensive and time consuming process.

Perimeter metal and flashings were primed and two layers of Energy Seal's Acu-Caulk Brush Grade and Acu-Fabric polyester were applied.



**Heavy layer of cement**



**Cement Debris**



**Grinding the metal**

The original concrete deck was irregular. After the deck was primed, 6 gallons per 100 square feet of rubberized emulsion was applied to the roof deck followed by 1 layer of soft polyester. This process was repeated for a total of 2 layers. Using soft polyester allowed for the waterproofing system to mold to the concrete deck avoiding any air pockets or voids. A final coating of 6 gallons per 100 square feet of rubberized emulsion completed this phase of the job.

## Acu-Shield White Roof Coating

After the rubberized roof cured, Energy Seal Coating's Acu-Shield acrylic coating was applied at the rate of 2 gallons per 100 square feet. After the acrylic coating dried and cured 1 gallon per 100 square feet of Acu-Flex Hydro was applied. The coating blocks 90% of the sun's UV rays and protects the new system from the hot desert sun. It will also stretch along with the rubberized material underneath, giving the roof flexibility.

Once the whole roof system was complete a walking deck was installed to all of the high foot traffic areas.

Upon completion Mitsubishi Mining received a 10-year warranty.

The job came in on time and on budget

Century Roofing has been using rubberized emulsions and acrylics for three generations. We have been combining them with tough polyester reinforcement material for 17 years.

If you have tough, difficult or unusual waterproofing concerns we can help.

May we put **three generations** of waterproofing know how to work for you?

Century Roofing  
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Lic. No. 793960



The roof deck stripped of cement. It is now ready for priming



Equipment and flashings are prepared on the primed roof deck.



After the roof deck was primed all pitch pockets, boxes, flashings and equipment was sealed with Acu-Caulk and Acu-Fabric polyester by Energy Seal Coatings, Inc.

# Waterproofing Detail



**This penthouse needed special attention.**

**1<sup>st</sup> photo.** All embedded concrete behind the wall was removed.

**2<sup>nd</sup> photo.** To keep the deck watertight a lead flashing was installed completely around the base as a counter flashing.

**3<sup>rd</sup> photo.** The finished roof



After the roof deck was prepared, the rubberized emulsion was pumped from our tanker to the top of the silos.



Acu-Fabric being applied with rubberized emulsion



A heavy coating of rubberized emulsion being applied on top of two layers of Acu-Fabric and emulsion

# Coating the Roof



Spraying the first layer of Energy Seal's Acu-Shield onto the roof deck



The roof with walking deck installed

# The Finished Deck

