

CST Covers Replaces Fiberglass with Aluminum Domes



**Twin 65' diameter aluminum domes
Ironwood, MI 2000**

CST Covers recently completed construction of a second pair of wastewater tank covers at the Gogebic-Iron Wastewater Treatment Facility in Ironwood, Michigan. This most recent contract consisted of twin 65' diameter Aluminum Domes for the facility's primary clarifiers. Previously, CST Covers replaced tank covers following a disastrous collapse of two fiberglass domes at the plant. CST Covers is the world's largest Aluminum Dome builder. In January of 1996, two 95' diameter fiberglass domes collapsed under a heavy, unbalanced snow load.

Following the collapse, a structural engineering investigation concluded that the domes were likely to fail at approximately 25% of the average annual snowfall for the region. Located along Lake Superior, the Ironwood area sees an average snowfall of more than 13 feet. "At the time we toured other wastewater treatment facilities that had dome covers and concluded we wanted domes to replace the collapsed fiberglass covers," said Mark Bowman of the Gogebic-Iron Wastewater Authority. "We researched dome manufacturers to begin the replacement process."

Energenecs, CST Covers' local representative, joined three other dome suppliers in the bid process. According to Don Voigt of Energenecs, "Even though CST Covers' proposal was not the lowest price, they were awarded the contract based on their impressive record of structural integrity and proven performance in extreme weather conditions." A prime example of that integrity is CST Covers' Dome at Antarctica's South Pole Science Center, which has been withstanding the harsh conditions of the Antarctic since 1972.

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CST Covers Domes

CST Covers of Conroe, Texas is a leading manufacturer and installer of custom-designed aluminum covers.

The company's broad product offering includes aluminum geodesic domes, extruded and formed flat covers, truss and joist supported cover structures and custom architectural cover designs for use in a wide variety of applications.

CST Covers are used for storage tank applications in water, waste water and petroleum as well as large dome structures for the storage of dry bulk materials. CST Covers' design, engineering and construction excellence are acknowledged throughout the cement industry and the world.

Under the most recent contract, two domes were assembled on-site next to the clarifiers and then lifted into place with a crane. The tanks were never taken out of service.

In addition, CST Covers also built an intermediate structure between the two clarifiers which houses blowers, gauges and other equipment for the clarifiers. Since workers are routinely under the domes for inspection, each is equipped with a skylight to provide natural light for those workers. And, to withstand those harsh winter snowfalls, the domes are engineered to support snow loads of 60 psf.

CST Covers has long been recognized in the water and wastewater treatment industries for providing superior basin covers. CST cover systems are inherently lightweight, but extremely strong and able to withstand heavy wind and snow loads. The all-aluminum construction is virtually maintenance-free, and the

non-corrosive qualities of aluminum work well in water and wastewater treatment situations where corrosive vapors can shorten the life span of alternative cover options.

CST Covers' years of experience building aluminum structures for the water and wastewater industries has resulted in an integrated structural frame and roof panel system that can be manufactured and erected in much less time than required for alternative cover systems.

CST Covers has been building aluminum domes and other structures for more than 50 years and has more than 16,000 installations throughout the world in industries as varied as water and wastewater treatment, petroleum and bulk storage, and scientific research. CST Covers dome and roof systems for architectural applications are in place as sports arenas, cruise terminals, planetariums, churches, and more.

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