

CASE STUDY

Chilled Water Pipe Insulation Supporting Solar Power

Armacell's ArmaFlex® insulation helps keep chilled water systems icy cold at a brand new solar panel manufacturing facility. Learn how our easy-to-handle closed-cell foam shines in comparison to the competitors. **Armacell in action.**

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ArmaFlex[®]

Illuminating Insulation Efficiency

Project: Chilled water piping and air handling insulation installation for a new 1 million sq ft solar panel manufacturing facility

Location: Ohio, US

Insulation Contractor:

Superior Industrial Insulation

Scott Leonard, Superintendent

Paul Justen, Operations Manager

Distributor: Bay Insulation

Challenge: A massive mechanical room with 98 air handling units, 6 chillers and 18 pumps with supporting pipes needed efficient insulation at a new facility within a tight time crunch. Insulation contractors needed planning assistance and training to get the best possible fit on such a large installation.

Solution: Steve Johnson, Applications and Training Manager at Armacell, performed AQIP training and supported contractors through insulation pattern fabrication creation which saved installation time and ensured the best possible fit resulting in a clean, professional install.

Large scale building construction ignites the need for effective installation planning and design ingenuity. A newly constructed facility that manufactures solar panels installed an impressive 98 air handling units and 6 chilled water systems, which included 18 pumps. This level and size of machinery required a spark of creativity when it came to properly insulating and maintaining energy efficiency, which of course is a large priority for a solar panel company.

Resourcefulness and quality were the main focus for Superior Industrial Insulation Superintendent, Scott Leonard. "I prefer ArmaFlex® products over the competitors because of its usability. It doesn't dull our knives and it flattens out easier, even though it comes in roll form."

Efficiency was another focus, especially for Paul Justen, Operations Manager at Superior Industrial Insulation. Justen had the challenge of insulating a hefty mechanical system and relied on Armacell's Applications and Training Manager, Steve Johnson, to provide AQIP training to new apprentices. After the training, the contractor teams brainstormed best practices and technical application ideas to effectively manage the planning of such a large install. The support of Armacell through training and development resulted in the contracting teams creating templates which allowed the installers to fabricate large sections of ArmaFlex insulation into piece kits, saving many hours of install time.





This innovative approach to a mass insulation application allowed installers to dedicate their focus on perfecting joints and seals, without having to worry about meeting time sensitive deadlines.

“We chose an elastomeric product because of the sheer size of this job,”

A solar-powered home can reduce CO₂ emissions by **100 tons** in just 30 years!

explained Justen. “Fortunately we could streamline our process ahead of time by creating packs of pre-cut installation pieces; you can’t do that with fiberglass.”

In the end, the chillers, air handling and piping were insulated cleanly and professionally, but also within the tight time frame, thanks to pre-cutting the fitting kits. Ingenuity and technical expertise were key to the successful insulating of these chillers, pipes and fittings. ArmaFlex pipe insulation is ideally suited for cold water applications where chances for condensation are high. Low thermal conductivity and water vapor permeability of 0.050, ArmaFlex effectively prevents the formation of

condensation and spread of moisture, which can lead to mold and significant losses of thermal efficiency. Not only does our closed-cell foam insulation possess a low permeability rating, but it is also much less vulnerable to punctures and tears that can impair the thermal effectiveness of open cell and fibrous materials. Its smooth, flexible surface also fits tightly against the equipment, allowing close-fitting joint seams and termination points, preventing openings where condensation might form.

“This install with the help from Armacell was just a novel approach to doing this type of work,” Justen concluded. ■



All data and technical information are based on results achieved under typical application conditions. It is the customer's responsibility to verify if the product is suitable for the intended application. The responsibility for professional and correct installation and compliance with relevant building regulations lies with the customer. By ordering/receiving product you accept the Armacell General Terms and Conditions of Sale applicable in the region. Please request a copy if you have not received these.

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ABOUT ARMACELL

As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With 3,100 employees and 24 production plants in 16 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for high-tech and lightweight applications and next generation aerogel blanket technology.

For more information, please visit:
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