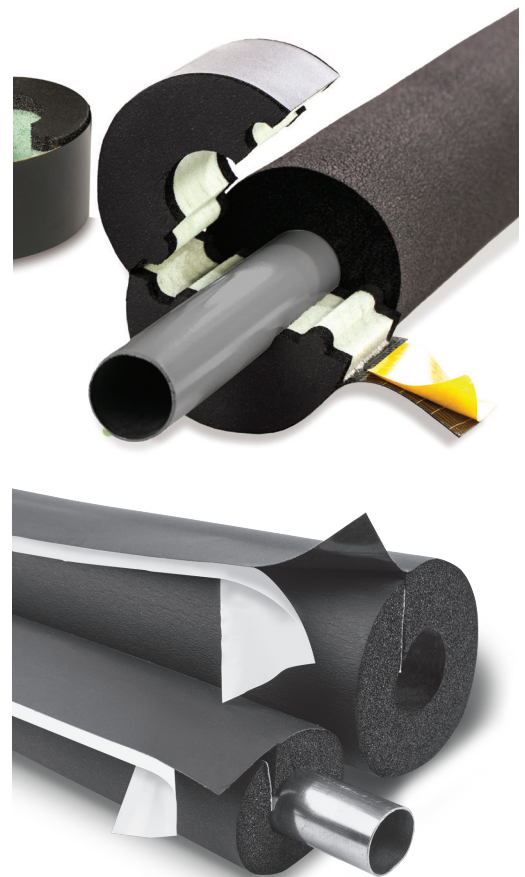
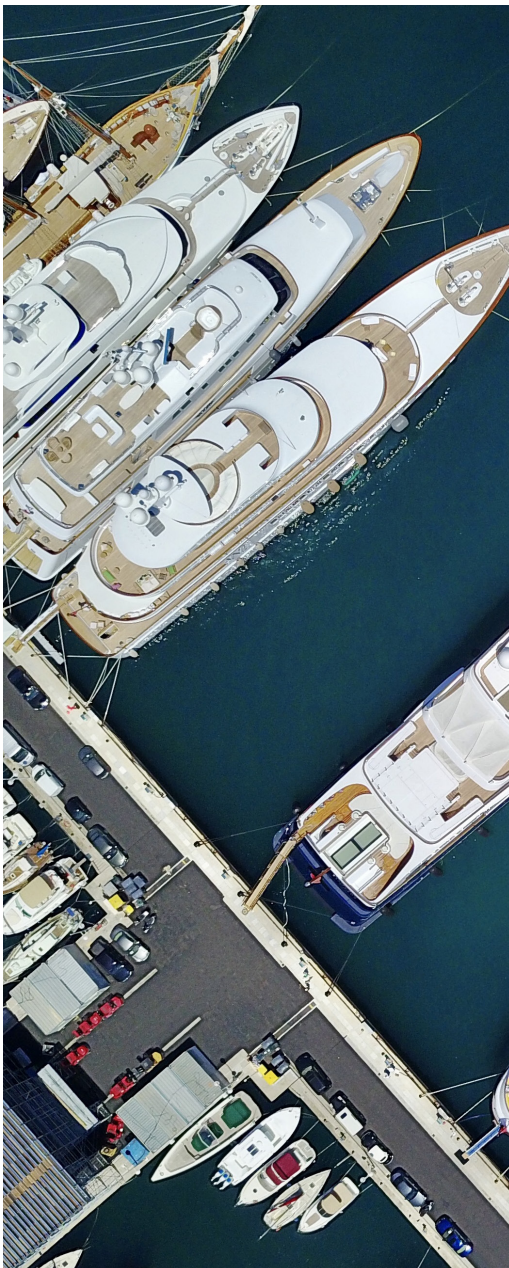


CASE STUDY

Marine Energy Efficiency and Condensation Control

Easy-to-install AP/ArmaFlex® insulation, AP/ArmaFlex Insulation Tape, and ArmaFix® EcoLight pipe supports provide lightweight energy efficiency and critical condensation control on mechanical systems and piping aboard luxury super yachts. Learn how installers depend on Armacell for innovative solution systems backed by expert technical support and service. **Armacell in action.**

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MAKING A DIFFERENCE AROUND THE WORLD

Smooth Sailing with Armacell Insulation Solutions

Condensation Control and Energy Efficiency Coming About

PROJECT:

Superyachts mechanical systems

LOCATION:

Hollywood, Florida

INSTALLER:

Poseidon Marine Air

CHALLENGE:

Provide energy efficiency and control condensation on pipes and tanks with a durable insulation product that is also easy to install.

SOLUTION:

Properly insulate pipes and tanks to prevent moisture ingress, condensation, and insulation compression with ArmaFlex® elastomeric insulation and ArmaFix EcoLight pipe support systems.

Whether cruising the open waters or racing for sport among the waves, yachts are enormous boats designed for leisure and luxury. Enjoying and maintaining expensive amenities like yachts and superyachts also requires one to have many levels of responsibility. The most important being safety assurance and mechanical efficiency of systems aboard the vessel. Just as with any mechanical system on land, the benefits of insulation on pipes, tanks and vessels are essential to effective yacht operation.

Yachts and superyachts have complex systems on board to not only navigate the ship but also to support operations and passenger comfort. These can include fuel, propulsion, hydraulic, ventilation, plumbing, and temperature systems just to name a few. Within these systems, networks of pipes, valves, vessels, or tanks all work together to supply energy or resources to mechanical equipment. Conscientious owners and captains understand that managing the energy efficiency of these systems is key to maintaining and operating a sophisticated yacht. One way to support energy efficiency is to use high-performing mechanical insulation — and not just any insulation will suffice.

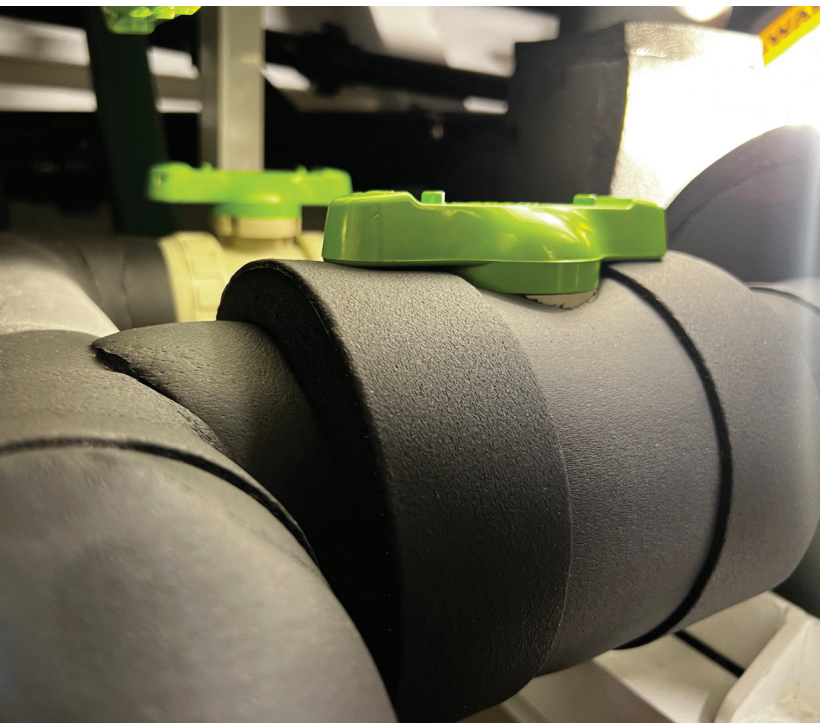
Mechanical installers working on superyacht systems know that corrosive elements, increased humidity, and risk of moisture, can lead to condensation which impacts performance of the mechanical system. Marine applications cruising along the coast particularly

require a durable, moisture-resistant insulation suitable for high humidity environments. In coastal climates, the damp moisture can penetrate most surfaces, so it is essential to insulate mechanical systems and piping. Without insulation, cold water piping would “sweat” just like a glass of ice water on a hot day. Installers can prevent condensation from occurring by insulating pipes and systems with enough insulation to keep the surface temperature above the dew point. Surprisingly, even a mere 10 percent increase in humidity can impact the amount of insulation needed!

That is why Hector Castañeda, owner and installer at Poseidon Marine Air in Florida, trusts only Armacell’s insulation solutions and accessories when he is contracted to insulate systems on superyachts. His company is known for exceptional work insulating steel, PPR, and PVC pipes, air handler systems, expansion tanks, and more on these enormous boats. Castañeda depends on his materials and industry expertise to provide exceptional quality and fast service for his clients operating luxury superyachts. “I will only use Armacell’s products and have not considered using other materials,” said Castañeda. “The insulation is easy to cut and handle and I am able to make unique, custom fittings for pipes and tanks on the boats. I can even create templates to make prefabricated elbows to any size I need, saving time and effort on the job,” he continues. On the most recent 100-foot superyacht project Poseidon

Did You Know ?

According to SuperYacht Times, there are over **9,000** yachts afloat as of today, of which **5,396** are considered superyachts, meaning they measure over **80 feet** – that’s about the length of three school buses!



Marine Air completed, Castañeda used AP/ArmaFlex insulation, ArmaFlex Insulation Tape, and ArmaFix EcoLight pipe supports to successfully insulate hard-to-reach pipes in tight quarters. "I rely heavily on my training for these tricky installations below deck. Armacell provides not only superior customer service, but also industry trusted training. I have gained knowledge from Armacell by attending their AQIP training and taking Armacell Academy training classes."

Installers that work with Armacell experience superior support and technical expertise. "We have been supporting Poseidon Marine Air in several yacht projects and it is nice to see the pride they put into their work, always targeting for the best installation possible. I am impressed with the quality of their installations," explains Rafael Briceño, Regional Sales Manager, Northern Latin America, Mexico and Florida. Whether it is a private or commercial yacht, installers that use Armacell's solutions can help their customers experience smooth sailing for many nautical miles in the future.

HIGH PERFORMING SUPERYACHTS DESERVE HIGH PERFORMING INSULATION

AP/ArmaFlex closed-cell insulation provides long-lasting thermal efficiency and condensation control on pipes

and mechanical systems. It's the ideal solution available in sheets, rolls, and tubes for quick and efficient installs. The low thermal conductivity makes it an efficient thermal barrier. The closed-cell foam structure offers excellent water-vapor transmission properties, which reduce the need for additional vapor retarders indoors. This easy-to-install, durable insulation is also made with Microban® antimicrobial protection to resist mold and mildew growth on the insulation and is GREENGUARD® Gold Certified to low emission standards with low VOCs and no off-gassing.

AP/ArmaFlex Insulation Tape is a pressure sensitive 2" wide tape specifically engineered to retard heat gain and control condensation drip on

domestic cold-water, chilled-water, and other cold piping and fittings, and to reduce heat loss when applied to hot-water lines that operate up to 180°F [82°C]. It is perfectly suited for insulating short lengths of pipe and fittings in congested or hard-to-reach areas.

ArmaFix EcoLight pipe supports with load-bearing PET core, protect insulation from being crushed or damaged by the pipe hanger which can cause a thermal bridge point resulting in condensation formation. These innovative pipe supports maintain the thermal integrity of the system and are self-sealing, lightweight, and easy to install. ■



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ABOUT ARMACELL

As the inventor of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal 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 more than 3,300 employees and 27 production plants in 19 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for acoustic and lightweight applications, recycled PET products, next-generation aerogel technology and passive fire protection systems.



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