

# Project Profile

## Newpark Mats & Integrated Services

Carencro, Louisiana



## Chilled water system to bring increased production, quick return on investment

Newpark Mats & Integrated Services (NMIS) engineers and manufactures the world's most advanced solutions for portable roads and jobsite staging. NMIS has been serving the oil and gas, and utility industries since 1960. When the company wanted to develop a chilled water system to increase production, they enlisted Johnson Controls to bring the idea to life.

NMIS manufactures a patented composite mat system used for a variety of applications, such as temporary roadways, work pads and storage sites. The mats allow vehicle travel or staging operations in locations that might otherwise sustain permanent damage from ruts or tracks. These composite mats stabilize loads, keep the worksite clean, protect surfaces, can be easily moved when the project is complete and provide a safe, cost-effective surface for year-round, all-weather performance.

To increase production and meet growing demand, NMIS knew it needed a faster and more consistent source of chilled water than its existing cooling tower could supply. Without the internal resources to design or install a chilled water system to support a custom process, NMIS contacted Johnson Controls to develop a solution on an aggressive timeline. Utilizing its team of experts, Johnson Controls was able to engineer a system and deliver a turnkey solution.



The mat systems are used for a variety of applications such as temporary roadways.

"Johnson Controls understood what we were looking for, evaluated our manufacturing process, and developed a solution that met our timeline and budget, and delivered the increased production we were looking for."

#### NEWPARK MATS & INTEGRATED SERVICES

#### SERVICE SOLUTIONS

- Engineering and design of a chilled water system to improve the manufacturing process
- Air-cooled chiller (YORK® YCAV 527t AC)
- Digital controls
- Rental chiller (YORK® YCAS 440t AC)

## Turnkey solution improves process, meets timeline

Increasing production meant cooling water more quickly and consistently for NMIS. Chilled water is an integral part of any plastics manufacturing process. The availability of chilled water and variations in water temperature can greatly impact curing time and the number of mats that can be produced on any given day. Using a cooling tower as the source of chilled water had a direct impact on production capacity, since cooling towers are subject to ambient temperature. Extremely warm weather can lengthen water-cooling time and/or cause unacceptable fluctuations in water temperature, both of which can pose limitations on manufacturing and affect product quality.

The Johnson Controls solution included the installation of a 527 ton YORK® air-cooled chiller, an expansion tank and a controller. The expansion tank allows for water to be chilled and stored, prior to production. As a result, the operational demands on the chiller are no longer based on the immediate output needs and allow the chiller to be operated in a more energy efficient manner. Additionally, the control system measures the water temperature and optimizes chiller performance by modulating the chiller usage accordingly. The new chilled water system provides a constant supply of chilled water at a more consistent temperature, which allows for increased production.

## Improved process and production

As a result of the new chilled water system, the NMIS manufacturing process is no longer dependant on an inconsistent chilled water supply. The new system allows NMIS to produce mats more quickly, in larger quantities and with less fluctuation in their manufacturing process.

In addition, while construction was underway on the permanent system, Johnson Controls installed a rental chiller, which allowed NMIS to increase production capacity after just 30 days, and meet the high demand for product.

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