

## Qatar Petroleum Ras Laffan Industrial City, Qatar

General Rubber Corporation proudly provides self-retracting dismantling and other conventional expansion joint designs to Qatar Petroleum for all phases of their Common Seawater Cooling System at Ras Laffan Industrial City, Qatar. *General Rubber Corporation (GRC) continues to develop new, innovative expansion joints to meet the changing needs of our customers, even on high profile projects.*



**Challenge** • When Qatar Petroleum was developing the common water cooling system at Ras Laffan Industrial City, it required a number of large diameter dismantling expansion joints that would allow easy access to piping and equipment.

**Solution** • GRC's self-retracting dismantling expansion joints not only allowed easy access to piping and equipment, but also eliminated the need for complex anchoring systems.

The Ras Laffan Common Cooling Water System was designed to supply seawater as cooling water to existing and future industries, and has become the largest and most sophisticated in the world. The cooling water is currently running at an impressive 933,000 cubic meters per hour. Eventually, that will increase to an incredible 1,166,000 cubic meters per hour. To put it into perspective, the system could fill an Olympic-sized swimming pool in just 3 seconds. Internationally recognized contractors Dodsal and CCIC knew that GRC could not only meet their requirements, but also had over 60 years of experience providing expansion joints to facilities both in the United States and abroad. GRC's unique dismantling joint allowed them to meet their requirements in a restrained configuration. This restrained design minimized the need for complex anchors and guides. The magnitude and complexity of the job required the highest level of quality and design assurance possible. General Rubber Corporation worked with the design engineers and ultimately provided joints for all phases of the project. This included over 300 units ranging in size from 28" to 144", with nearly 100 of those joints having the 144" flange pattern.

The photos above illustrate the complexity and scale of the manifold system; for an idea of the enormous size, look for the worker walking along the 144" piping (photo on right).

General Rubber Corporation prides itself on providing powerful solutions for difficult design problems, allowing our expansion joint designs to range from the simple to the simply amazing.



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