

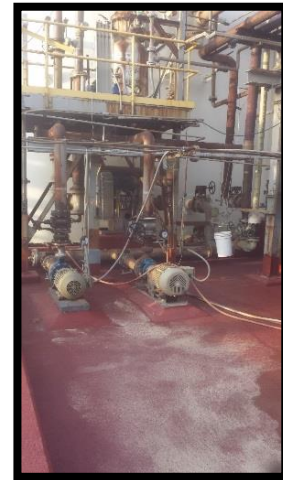
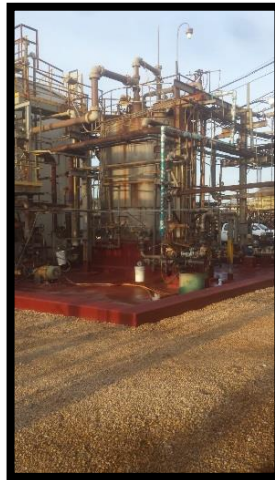


Case Study: Rentech Nitrogen



Rentech Nitrogen Partners, L.P. is a nitrogen fertilizer company. Rentech Nitrogen owns and operates two fertilizer production facilities, one located in East Dubuque, Illinois and the other in Pasadena, Texas. Rentech Nitrogen East Dubuque is one of the primary producers of nitrogen fertilizer products in the Mid Corn Belt region of the United States, which is the largest market in the United States for direct application of nitrogen fertilizer products. Rentech Nitrogen Pasadena is the largest producer of synthetic granulated ammonium sulfate in North America, with sales in the United States and South America.

Rentech uses two unique production processes (differing between their two locations) that include Ammonia, Nitric Acids, Ammonium Thiosulfate (ATS) and Sulfuric Acids. Ammonium Thiosulfate is a very aggressive in-organic compound that had severely attacked the 1,042 sq. ft. floor and 992 sq. ft. vertical concrete substrate over many years of exposure. As the photos depict, the concrete had been severely attacked due to chemical spills and leaking pump seals. In addition the concrete slab was damp due to the required wash down prior to removal of deteriorated concrete.



Rentech chose Milamar's 6200 FS Vinylester along with 3300CR Novolac as they were tested on site and outperformed competitors systems in immersion testing conducted by Rentech. The entire installation/repair took seven days to complete. The working environment during the week was an average daily temperature of 85F – 90F with a relative humidity ranging from 50% - 65%. Fortunately no rain fell during the project. The preparation included pressure washing the surface to neutralize it and remove loose debris. Jackhammers were used to remove all eroded concrete. Diamond grinders were used on the vertical and horizontal surfaces. The plant was in production during installation so safety training classes were provided at Rentech and full face respirators were provided to each installer in case of an Ammonia leak. Rentech is pleased with Milamar's system that will provide years of concrete protection from their production processes which replaced previous costly trial and error applications of spot repairs and patching that consistently failed.