Cooling system expansion joint protected with Belzona

ID: 7509

Industry:	*Power*	Customer Location:	*Eastern Oklahoma*
Application:	*VPF-Valves, Pipes and Fittings*	Application Date:	*July 2017*
Substrate:	*Rubber and steel mesh*		
Products:	** 2311 SR Elastomer 2211 MP Hi-Build 2221 MP Fluid 2911 Conditioner 9341 Reinforcement Sheet ,*		

Problem

The rubber joints are deteriorated and have developed slow leaks in a few spots. Replacement joints are very expensive and require an 8 week lead time to order. In the middle of summer, the plant has very limited ability to shut down for maintenance. The plant engineers were concerned that further damage to the joint could result in a blowout, causing massive flooding inside their facility and potentially overheating a turbine.




Photograph Descriptions

* 1: The joint is 52" diameter and 9" wide ,
* 2: Damaged rubber exposes the steel mesh underneath ,
* 3: The most severe damaged areas are patched with 2311 and 9341, after prepping and conditioning the surface ,
* 4: The full surface of the joint is sealed with 2211 and 9341, followed by a coat of 2221 ,

Application Situation

This coal-fired power plant uses river water pumped into several condensers to cool their turbines. There is a rubber expansion joint between the 52" inlet pipe and the condenser head. The cooling water flows through this system at low pressure, high volume.

Application Method

Application was similar to VPF-05 system leaflet, but slight variations were made due to time constraints.

Belzona Facts

The customer chose Belzona considering the success of previous repairs in their facility. Their main goal was to seal and protect the expansion joint until their next scheduled outage when the joint can be properly replaced. Belzona's elastomers were a good fit for this purpose. The repair was done on a Friday and the system was ready for operation about 36 hours later, which was a much quicker shutdown than replacing the joint.