

Loctite® 5920™ Copper High Temperature Silicone Seals Fiberglass Gasket In Place With No Leaks

Thermal Generating Station Scheduled Shutdown Maintenance Log

Situation:

A thermal generating station in Canada looks to Henkel for many application solutions. Maintenance Engineers at the plant were having problems maintaining a tight seal on the windbox panel doors of the pulverizer unit, and they called Henkel in to help.

The pulverizer unit grinds coal pieces from 1" down to a fine dust for use in the boiler furnace. The windbox then blows the fine coal into the furnace. The doors on the windbox allow access to the pulverizer for maintenance and repair. In the past, asbestos gaskets had been used to keep the door sealed tightly. With health and safety codes eliminating asbestos, the gaskets had been changed to a fiberglass weave material. The fiberglass did not seal well on its own, especially in the high temperatures (400°F) of the furnace. When the doors were riveted shut, the heat caused the fiberglass to stretch around the rivet holes, creating leak paths. Coal dust was being blown into the work place, causing increased health and safety risks. In addition, the coal dust was affecting the motor life of the pulverizer.

Solution:

Loctite® 5920™ Copper is an RTV silicone flange sealant. It provides high temperature resistance to 480°F continuous, and 650°F intermittent. Loctite 5920 Copper is non-corrosive, low odor, and fills gaps to 0.24".

Results:

Maintenance Engineers applied Loctite 5920 Copper by manually dispensing beads of the sealant to the fiberglass gaskets of the windbox panel doors. Loctite 5920 Copper seals any potential coal dust leaks, especially where the ladder tape stretches around the rivets that hold it in place. The ladder tape, dressed with Loctite 5920 Copper, is easy to remove and when the covers need to be removed for service work or inspection, Loctite 5920 Copper peels off to allow for reapplication.

The dust in the mill aisle was drastically reduced with the introduction of this Loctite® sealing method. With less dust on the moving parts of the motor, motor life has been increased. More importantly, worker and plant safety has been improved due to less coal dust hazard.



Loctite® 5920™ Copper securely seals pulverizer doors to prevent potential coal dust leaks, yet doors remain easily removable for service or inspection.

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