

BELZONA WORKS WHEN THE HEAT IS ON

ID: 5379

Industry: *Steel & Metal Processing*
Application: *HEX-Heat Exchangers*
Substrate: *Steel*
Products: ** Belzona 1251 (HA-Metal) ,*

Customer Location: *Smelter, British Columbia, CA*
Application Date: *September 2014*

Problem

Leaks had formed around a set of plates used to support cooling coils where they pass through the wall of the roaster.



Photograph Descriptions

* 1. Insulation stripped to expose the area; the plates vary from 200°F to 330°F and the exposed piping is over 450°F.
2. The leak is coming from behind the center plate, especially the end at the LH side. 3. Completed application; the center plate is sealed. Please note the Belzona product on the left end of the plate where a bolt was inserted and extra material was required to seal this live leak of hot SO₂ gas. ,

Application Situation

The wall of a fluidized bed roaster where zinc ore concentrate is burned to create zinc oxide.

Application Method

The gap between two of the plates was sealed using Belzona 1251. The area to be repaired was cleaned with a hand-held wire brush. Then, Belzona 1251 was applied with a metal spatula onto the hot surface (temperature varied from 200°F to 330°F depending on location). In the area of the worst leak, Belzona 1251 was applied to reduce the hole size to approximately ¼" and a small bolt was then packed with Belzona 1251 and inserted. The bolt head was then covered with a cap formed of thin metal sheet, filled with Belzona 1251, and held in place until the product set. This repair was performed with the unit active and specialized PPE was worn accordingly. The application was carried out in accordance with a modified version of Belzona Know-How System Leaflet HEX-5.

Belzona Facts

The surface temperature of these plates is about 300°F when the unit is operating and it cannot be shut down. The roasters must be kept airtight to prevent air from contaminating the process and SO₂ gas from escaping. This facility has had many successful Belzona repairs so help was sought from the local Belzona representative. With Belzona, the leak of hot SO₂ gas was completely stopped in

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FS 695214
ISO 14001:2015
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