

“Diatomaceous Earth” Filter Media



This fitting pictured above was just off the pump discharge.

Location / Year

Food Processing Company
October 2009

Fabricator / Applicator

ECC Corrosion Inc.
Wisconsin Rapids, WI

Fabrication Details: Resin & System

Cerarmix Liner AR-1 @ 150 mils
Resin Swancor 901 – Food Grade Vinyl Ester
Structure: Hand lay up, W/Advantex ECR glass,
and Swancor 901, MEKP cure system.

Technical Data

Initial installation October 2009

- 4” Diameter Fiberglass Transfer Piping
- 4” Elbows with Vanstone Flanges

Service Conditions

Chemicals: Diatomaceous Earth, & Water
Temperatures: Ambient
Pressure: 40-60 PSI
Cycle Times: 1-2 Hours every 12 Hours

Diatomaceous earth is 80 to 90% silica, with 2 to 4% alumina (attributed mostly to clay minerals) and 0.5 to 2% iron oxide.

Design Considerations

Food Processor... used many different materials in transfer line pumping for diatomaceous earth and water mixture to filtering equipment. This food processor had tried carbon steel, Stainless Steel, PVC, and many other piping systems with limited success. Longest service life seen at the time of installation 3-6 months.

The above photos were taken January 7th, 2013, when the system was shut down.

Comments

Sold and installed 10/14/2009 and remove from service 1/7/13.. 3 Years, 2 Months and 15 days vs. 3-6 Months.

Unfortunately, unable to continue testing due to a change in process. (Jan. 2013)