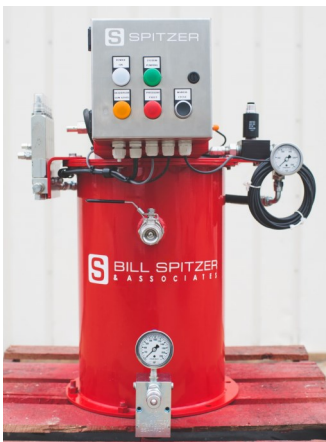




BILL SPITZER & ASSOCIATES

O: (713) 937-8977

<http://www.billspitzerassoc.com/>



Epoxy Grouting Inverted Baseplates

Location: Texas City, TX

Date: June & July 2014

Product: Chockfast® Red

Volume: 1,831 units or 2,930 ft³

Skid Size: 8' x 12'

Avg. Crew Size: 6 per set-up

Total Pumps Grouted: 30

Low Ambient: 82°F

High Ambient: 92°F

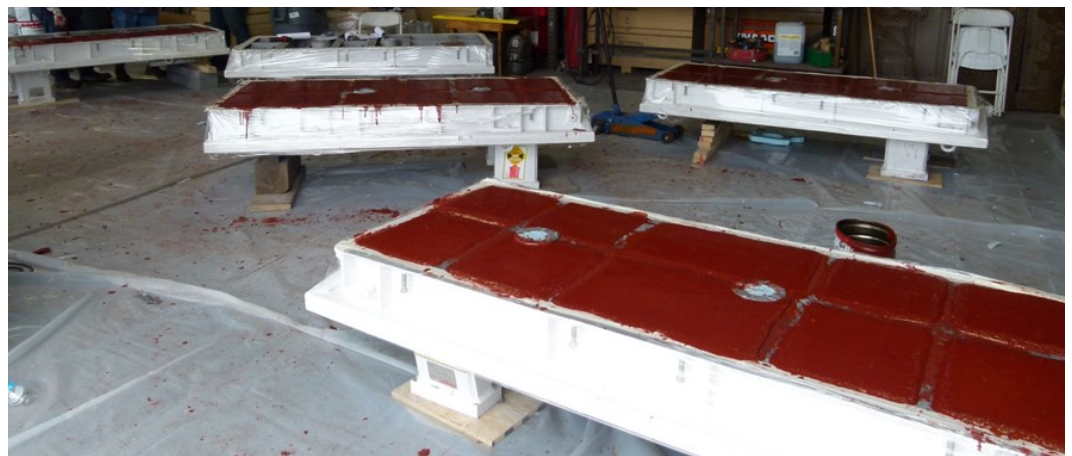
Max Wind Speed: 30 mph

Avg Dew Point: 81°F



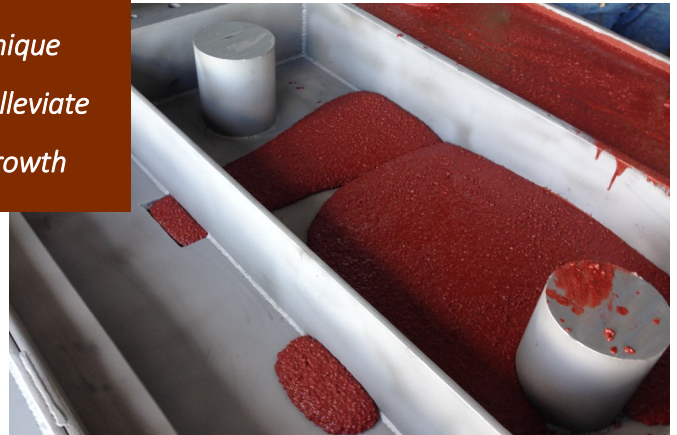
Client: This NYSE organization is an international manufacturer and marketer of transportation fuels and petrochemical products. The customer operates several petroleum refineries and ethanol facilities across the United States, Canada, and United Kingdom.

Overview: A refining facility needed 30 pump bases epoxy grouted quickly to help decrease schedule increases from unforeseen delays. Moreover, assure surface contact or effective bearing area (EBA) to provide a monolithic foundation system. The elevated temperatures of the summer, site specific obstacles, and time constraints to the project enabled Bill Spitzer & Associates (BSA) to provide guidance of grouting in this unique manner. BSA was able to enhance constructability, advise the process of grouting 30 inverted pump bases, assure specification achievement, and supervise the grouting field pouring.





BSA was asked to create a unique solution to alleviate schedule growth



Challenges:

- 30 pump baseplates needed to be epoxy grouted quickly
- The original project schedule was behind target
- Overrun costs were beginning to multiply from scope growth and scheduling issues
- The baseplates needed to be installed correctly by API 686 standards, the 1st time

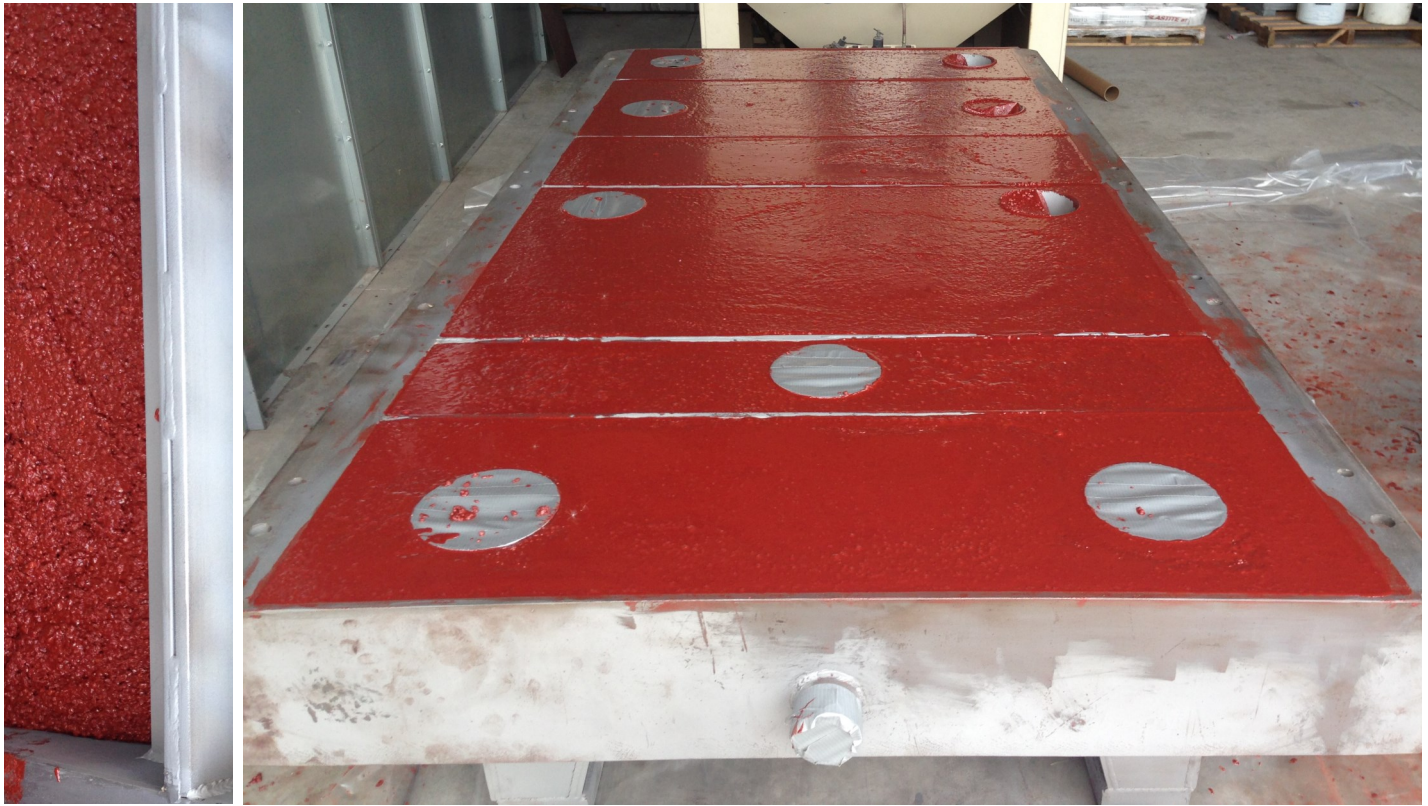


Primer Compatibility:

The importance of a compatible epoxy grout primer for baseplates and skids is a critical concern. With this application, BSA recommended MS-7CZ Rust Inhibitive Primer. This primer is the industry leader for epoxy grouting applications.

Primer Attributes:

- High internal tensile strength
- 2-Component polyamide epoxy containing complexed phosphate
- Zinc and phosphate are engineered at a molecular level to create an exclusive primer
- Contain anti-corrosion traits
- Promotes adhesion of surfaces



Outcomes:

- Provided on-site technical guidance throughout the epoxy grouting procedure
- Improved grout schedule 50%
- Enhanced constructability and installation in the field
- Boosted mechanical and chemical bonding between surfaces
- Created a void free surface contact or effective bearing area



Bill Spitzer & Associates can supervise the before, during, and after project management stages to assure properly grouted equipment, machinery, baseplates, and skids.

Solutions: Bill Spitzer & Associates (BSA) spearheaded the epoxy grouting from a customer need. BSA addressed monolithic concerns by qualitative methods

and discussion. This was achieved by heightened chemical and mechanical bonding with epoxy, baseplate, and primer. Transportation worries were

avoided, as grouting was performed on-site and in proximity to field pouring. The uniquely specialized concepts of epoxy grouting can be simplified with BSA specialized expertise. Also, we foster engineers, owners, and contractors to become more profitable, timely, and productive. We employ a client first model.



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Corpus Christi, TX (361) 944-9926

Dallas, TX (281) 409-6845

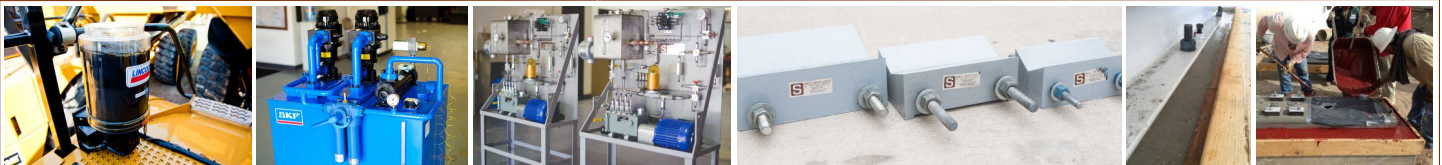
Odessa, TX (817) 456-7417



We exist to take care of customers

<http://www.billspitzerassoc.com/>

CORE PRODUCT PARTNERS:



Our Story

Bill Spitzer and Associates, Inc. (BSA) was founded in 1978 by Bill Spitzer, Shirley Spitzer, and Jim Mosebrook with a primary focus on servicing reciprocating compression equipment used in the pipeline, oil and gas, petrochemical, and refining markets. Lincoln Lubrication Systems, ITW foundation products (Previously Philadelphia Resins), and Spitzer Enterprises air filtration systems were the primary product lines. The addition of Alemite Oil Mist systems, Superbolt technologies, specialty ready mix concrete designs, industrial coatings, and anchor

bolt products created opportunities to expand into a wider variety of new markets: food and beverage, heavy and light manufacturing, construction, over the road equipment, liquified natural gas (LNG), oil well servicing equipment, pulp and paper, power generation, railways, and many more. We continue to support these markets with an evolving portfolio of products and services.

Currently, BSA still employs a small business mindset that started back in 1978; however, BSA has methodically grown and integrated competitive advantages, differentiation, modernization, and technological advancements. Connor Spitzer, 3rd generation, commenced his leadership in 2014 to merge an "old school" mentality with an improved focus on continuous process improvement and strategic planning methods. All of these adaptations are performed with one goal in mind, ensuring customers receive the best possible service and support found everyday.

*We proudly serve NM, TX,
LA, MS, AL, GA, SC, & FL*