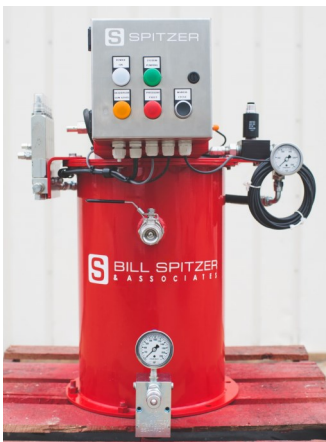




BILL SPITZER & ASSOCIATES

O: (713) 937-8977

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



Complex Jobsite Circumvented by On-Site Technical Expertise and Epoxy Grout Pumping

Location: Point Comfort, TX

Date: Sept & Oct 2017

Product: Chockfast® Red

Size: 460 units or 736 ft³

Avg Pour Depth: 5.75"

Joint Spacing: 7'

Joint Type: BSA Foaming

Concrete Prep: Chipped

Avg Concrete Temp: 74°F

Avg Lowest Ambient: 76°F

Avg Highest Ambient: 87°F

Avg Dew Point: 72°F

Avg Resin Temp: 69°F

Avg Aggregate Temp: 66°F

Client: An integrated resins and petrochemicals company that employs almost 3,000 people at over 20 production facilities, which specializes in five different business units.

Overview: Bill Spitzer & Associates (BSA) was selected for the project because of the complex structure of the olefins compressor train units, failure of competitors previous grouting events, and need for epoxy grouting subject matter experts to assure project scheduling and budget. Pumping would be essential to move epoxy grout on the elevated platform and around the various obstacles over a 3 day period. The average grouting area was about 6 inches deep by 7 foot sections with BSA expansion joint foaming. In this situation, the typically pumping distance ranged from 50 to 60 ft. Concrete was chipped 1.25" on average and BSA provided on-site technical grouting guidance, installer training, and epoxy grout pump rental.

Key Decision-Making & On-Site Guidance

- Constructability
- Flowability to Temperature Reactivity
- Maximizing Effective Bearing Area
- Epoxy Grout Viscosity to Pump Effectiveness
- Verification of concrete preparation, formwork rigidity & leak prevention, anchor bolt protection, clean contact surfaces, proper jack bolts, expansion joints, grout conditioning, proper primer, and adequate manpower



Bill Spitzer & Associates capabilities created predictable success over 3 epoxy grout pumping days. The grouting event lasted over 2 months and maintained the project schedule under budget.



Challenges:

- Meeting construction schedule marks and objectives
 - Securing constructability
 - Analyzing project parameters, pains, and obstacles
 - Preventing overrun costs
 - Exceeding expectations of the contractor and customer
- Providing On-site Guidance
 - * Reviewed design and layouts of baseplate, anchor bolts, and concrete foundations
 - * Estimated grout volume
 - * Discussed advantages for pumping epoxy grout
 - * Explained weather and climate considerations
 - * Conducted pre-grout training, meeting, and instruction
- * Verified and signed off on: foundation prep, expansion joints, pour depths, formwork, cleanliness, & bolts
 - * Advised epoxy grout mixing, pumping, and pouring
 - * Supervised grouting process and sequencing
 - * Implemented appropriate post-condition procedures for epoxy grout

Pumping Epoxy Grout Evaluation & Analysis:

- Effective, efficient, & productive placement of epoxy grout by hose
- Provides safer working environment in complex or obstructed facilities
- Reduced manpower 60% to 70%, this project 8 men
- Decreased of wood forming materials and formwork construction 50%
 - * This project saved 3 days in formwork construction
- Lowered total labor installation hours 233%
- Reduced total grouting cost over \$14,000
 - * Included pump rental, epoxy grout, & on-site guidance
 - * Reduced total labor time 1,344 hours, while using 8 less men

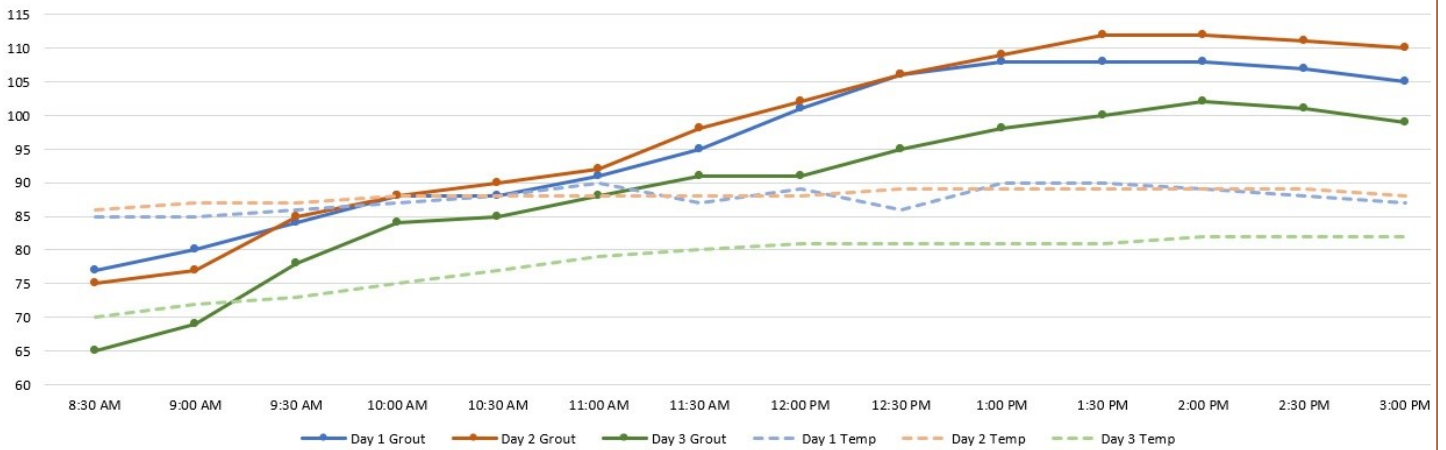




Bill Spitzer & Associates saved the customer over \$14,000 in total grouting costs and reduced total grouting labor time 233%



3 Day Temperatures - Epoxy Grout & Ambient



Solutions: Bill Spitzer & Associates (BSA) created a customized process for efficiently pumping Chockfast® Red and guiding the epoxy grout placement. The

uniquely technical aspects of epoxy grouting can be solved with BSA differentiated proficiency and aptitude. Furthermore, BSA advances engineers,

owners, and contractors to become more profitable, timely, and productive. BSA operates a client first mentality or specialization. BSA also found overlooked products needed for grouting the olefins units: jackbolt leveling pads, IMPAX IXT-59 solvent, jiffy mixing blades, paste wax, BSA expansion joint foam, and cement grout.



BILL SPITZER & ASSOCIATES

11530 Brittmoore Park Dr.

Houston, TX 77041

O: 713-937-8977

F: 713-937-1856

OTHER WAREHOUSES / BRANCHES

Baton Rouge, LA (225) 456-0605

Beaumont, TX (409) 351-2106

Corpus Christi, TX (361) 944-9926

Dallas, TX (281) 409-6845

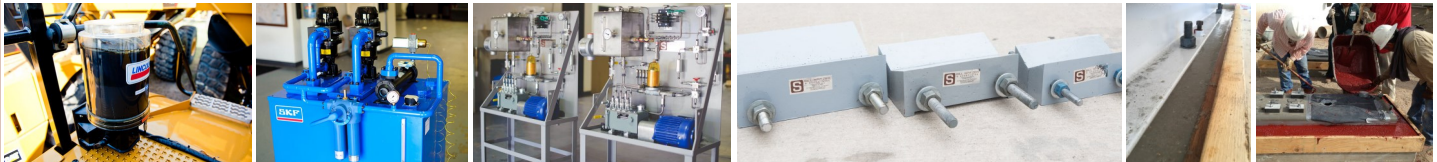
Odessa, TX (817) 456-7417



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.

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

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 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 or available everyday. No excuses.