BILL SPITZER & a s s o c i a t e s

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Automatic & Manual Grease Systems for 22 Fin Fans in 5 Separate Units

Location: Greater Houston, TX

Date: January 2020

Custom Fin Fan Grease Systems: Automatic and Manual Lincoln and Lubrication Scientifics Components

http://www.billspitzerassoc.com/

Application: Petrochemical Pipeline

Client: Major publicly traded company that that is considered one of the oil and gas supermajors by revenue. Additionally, the organization works globally and creates LNG, lubricants, natural gas, petrochemicals, and petroleum. The customer has been in business over 100 years and committed to powering progress to lower emissions.

Key Outcomes:

- Developed a procedure to remove, improve, and replace the existing fin fan grease system with automatic and manual solutions
- Lowered energy costs related to brake horsepower, fan static pressure, air volume, and fan static efficiency
- Return on new system lubrication system investment (ROI) was gained between 19 months to 24 months
- Maintenance cost were reduced 60% from downtime labor, hours, repairs, lubricant costs, energy costs, and manual action enhancements



Bill Spitzer & Associates delivered a modern way to simplify equipment maintenance and achieved ROI between 19 to 24 months

Overview:

Fin fans can be seen throughout the layout of petrochemical and refinery facilities. The inefficiencies and failures of these vital equipment systems can quickly disrupt and diminish the profitability of a plant from sudden issues or progressive efficiency deteriorations. The decreased focus of lubrication creates these typical lifetime cost performance failures: Finned Tubing, Fan Performance, Fan Bearings, and Hot Air Recirculation

Site Facility Situation:

The site was experiencing higher than anticipated energy costs and poor efficiency ratings in comparison to the Fin Fan OEM capability specifications. As a result, Bill Spitzer & Associates was contacted to review the performance of the underperforming Fin Fan system. The site and equipment investigation from Bill Spitzer & Associates revealed the need for two different grease lubrication systems for the 22 Fin Fans with modern divider blocks, proximity systems, and grease pumps. The customer had a concern about long lead times for various lubrication components; however, Bill Spitzer & Associates carried ample stock to mitigate the risk of missing schedule milestones.

Bill Spitzer & Associates (BSA) can create customized solutions to fit the client's needs, obstacles, or specifications for the entire fin fan system. The customized approach enables BSA to provide a turnkey solution for design, installation, commission, equipment reliability, and preventative maintenance.

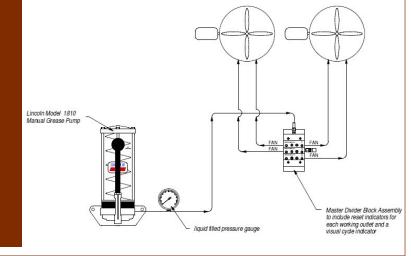
Bill Spitzer & Associates Automatic Fin Fan Grease System & Service:

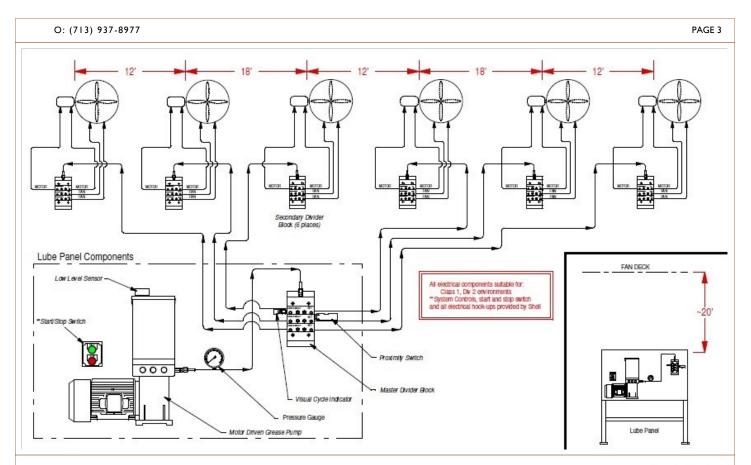
Diagnosis, System Design, Installation, Commissioning, and Preventative Maintenance

- Review application requirements, fan operating conditions, location, & access by on-site walkdown of the unit
- Determine the most reliable method of delivering grease to bearings and the metering devices, supply and distribution piping/tubing, and lubrication rates
 - * Motor driven pumps, pneumatic pumps, & manual pumps
 - * Divider blocks or injectors
 - * Pressure switches & gauges, cycle switches, controllers, custom panels, & plumbing recommendations
- Field matter experts install fin fan grease system and provide commissioning, start-up, & training
- Overview of preventative maintenance plan that fits the needs of the system and customer









BSA Multifaceted Fin Fan Grease Systems:

4 Automatic Systems

- Lincoln Motor Driven Grease Pump
- BSA Custom Lubrication Panel
- Lubrication Scientifics Divider Block, Proximity Switch, Controller, & Cycle Indicator
- Stainless Steel Tubing, Fittings, & Gauges

5 Manual Systems

- Lincoln Manual Grease Pump
- Lubrication Scientifics Divider Block
- Stainless Steel Tubing, Fittings, & Gauges

Results:

- 116 Points of lubrication
- 18 Total planned installation days
 - * 16 Actual installation days, preassembly saved time
- 0 Change orders & on-time installation
- Installed: 30 Divider blocks, 4 Custom BSA lubrication panels, 4 Auto grease systems, & 5 Manual grease systems
- ROI was gained between 19 months to 24 months
- Maintenance cost were reduced 60% from downtime labor, hours, lubricant costs, energy costs, and repairs





BILL SPITZER & ASSOCIATES CORE PRODUCT PARTNERS: 11530 Brittmoore Park Dr. Houston, TX 77041 ATS ELECTRO-LUBE 0:713-937-8977 F: 713-937-1856 **OTHER WAREHOUSES / BRANCHES** Baton Rouge, LA (225) 456-0605 Beaumont, TX (409) 351-2106 **Engineered Lubrication Systems** Corpus Christi, TX (361) 944-9926 LUBRICATION Dallas, TX (281) 409-6845 Odessa, TX (817) 456-7417 DIVIDER BLOCK SYSTEMS **NORD-LOCK** LINCOLN We exist to take care of customers http://www.billspitzerassoc.com/

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, and 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 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.