



CE815 Epoxy Grout installation

CASE STUDY – FASTRAC CE815 EPOXY GROUT

HIGH-SPEED GAS COMPRESSOR LOW CLEARANCE GROUTING

FasTrac CE815 Epoxy Grout is a revolutionary, three-component, 100% solids high-performance epoxy machine grout. It is characterized by low dust, high bearing area, low exotherm, negligible shrinkage and creep, fast cure and pumpable with excellent high flow qualities for improved workability and placement. **CE815 Epoxy Grout** is ideal for high stress applications such as wind turbines, gas transmission, refining, chemical processing, pulp and paper, crane rail, marine and other machine base plate grouting. New equipment installations or re-grouting applications subject to chemical attack and extreme vibration are ideal for **CE815 Epoxy Grout**. **CE815** can also be used as an anchoring adhesive.

The contractor successfully completed a difficult grout installation using **CE815 Epoxy Grout** on a high-speed gas compressor with < 2" of clearance, surrounded by piping, conduit, and other ancillary equipment. **CE815** has exceptional flow and extended working time which makes it the perfect grout for low clearance on large footprint equipment < 2". The superior flowability of **CE815** requires less head pressure to move. This allowed the contractor to pump the grout at a lower than usual volume and keep the grout within the forms and off the conduit, piping, and ancillary equipment. The extended working time

at shallow depths of the **CE815** allowed the contractor to pump the grout at a lower volume and have sufficient time to finish the exposed surfaces.

PROJECT DETAILS

Skid dimensions (each)

20 ft x 41 ft

Design grout clearance - 2 in

Actual clearance range – 1.5 - 12 in

Temperatures during grout Installations

Interior Ambient: 55 - 65°F (12.7 – 18.3°C)

Concrete temperature 58° (14.4°C)

Skid steel temperature 58° (14.4°C)

Part A Resin 72° (22.2°C)

Part B Hardener 72° (22.2°C)

Part C Aggregate 68° (20°C)

The contractor completed installation using a peristaltic grout pump.

The installation crew grouted the compressor package using a total of 120 cu. ft. CE815 Epoxy Grout 2 cu. ft. units.

FASTRAC CE815 EPOXY GROUT

HIGH-FLOW, HIGH-STRENGTH PUMPABLE EPOXY GROUT

THE DECISION TO USE FASTRAC CE815 EPOXY GROUT WAS BASED ON DIFFERENT FACTORS

1) Application complexity

The skids clearance above the top of concrete was 1.5"-2". In addition, an intricate array of piping, vessels and other obstructions made grout placement difficult. The lack of proper access eliminated the option to use headboxes and the low clearance hindered the movement of pump hoses from side to side. The substantial 'footprint'— large overall dimensions of the skid required an extremely high flow product to flow the width of the skid with minimal positive head pressure.

2) Construction schedule

During the construction phase, grout work was required to be done as quickly as possible to contribute to a faster schedule and a quicker completion date. As a result, CE815 Epoxy Grout was chosen to achieve the shortest turnaround time between grouting operations.

3) Weather conditions

The project location experienced variable weather conditions in early spring. While the installation was inside a building, it lacked heating, so temperatures inside the work areas were more susceptible to outside conditions. For grouting to be successful under these conditions, special preparation, handling, and installation techniques were required.

THE SUCCESSFUL GROUT INSTALLATIONS IS DIRECTLY ATTRIBUTED TO:

- A professional grouting contractor who is well prepared with a plan and the proper equipment to complete the job.
- Understanding the conditions, requirements, and selecting the right material needed to pump the grout under the equipment.

Using the pump provided a consistent flow of material and eliminated the use of head boxes and buckets, resulting in time savings, increased efficiency, reduced waste, and lower cleanup times. By decreasing the turnaround time between grouting operations, the contractor was able to complete the grout installation within the scheduled three-day period, resulting in minimal downtime.

AS A RESULT OF SELECTING CE815 FOR THIS INSTALLATION, THE CUSTOMER ENJOYED A NUMBER OF ENHANCED OPERATIONAL AND PERFORMANCE BENEFITS.

CE815 Epoxy Grout does not require reducing aggregate to improve grout flow which reduces the number of units needed and reduces costs.

The superior flowability of CE815 Epoxy Grout was the key to moving grout across the full width and length of the equipment skid.

CE815 Epoxy Grout is an excellent grout to use when pumping.

The 2 cubic foot unit size CE815 Epoxy Grout allows for more productive grout batching and high-output placement with less time and effort.



FasTrac recommends a minimum of 2" of clearance between the top of concrete and the bottom of the skid. When 2" of clearance is not possible then proper preparation is essential. S2W Contracting did an excellent job of heating the building, material, and equipment.



Properly conditioned material and equipment is a key element of a successful grout installation. FasTrac CE815 Epoxy Grout should be conditioned to a temperature between 65-95° F for 24 hours with optimal temperature between 75-85°. All equipment and surfaces should be conditioned to 60-90°.



With limited clearance, equipment, conduit, and piping obstructing access a high flow product is an essential component of a successful grout installation. FastTrac CE815 has superior flow characteristic compared to other epoxy grouts. The CE815 Epoxy Grout aggregate design flows incredibly well without reducing aggregate. Therefore, the contractor was able to use a full 2 cf unit when batching material.



The CE815 Epoxy Grout's excellent side to side flow with limited head pressure allowed for placement in a tight location. The extended working time (>60 minutes) allowed the contractor plenty of time to place the grout and finish the surfaces. The combination of CE815 Epoxy Grout and a professional grouting contractor turned a difficult environment into a routine grouting project.



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ABOUT FASTRAC CONSTRUCTION PRODUCTS

With more than 30 years' experience in developing and manufacturing cutting edge products, FasTrac Construction Products is known for performance and consistency. When combined with our commitment to excellent customer service you have a winning combination that brings value to the construction industry. FasTrac products include rapid strength cements and concrete, repair mortars, high performance grouts, a full range of epoxies, mixing systems, HFST installation, and our latest innovation – Hybrid Polymer Concrete. www.fastracproducts.com



ABOUT ENERGY TECH SYSTEMS

Established in 1992, Energy Tech Systems continues to be your primary source for industrial machinery grouts, natural gas engine & compressor parts and epoxy pipe supports. ETS continues to be the largest and most experienced supplier of FasTrac Construction Products epoxy grouts in the Northeastern United States. Our mission since inception has been to satisfy customer demands with great quality products and exceptional service, a recipe that has proven successful for over 30 Years. www.energytechsys.com



ABOUT S2W CONTRACTORS

Multi-national and local companies have called on the expertise of S2W Field Services for the installation, commissioning, maintenance, and repair of natural gas compressor packages on production lines, interstate and intrastate pipelines, storage facilities and other compression applications. From the smallest job to the largest, S2W Field Services will get you up and running, and keep you operating 24/7. Predict, preempt, and prevent. At S2W Field Services, we know that 100% up time is essential. Our team utilizes their experience and knowledge of what can go wrong, and what does go wrong, to predict the future so that you can stay operational. www.s2wcontracting.com