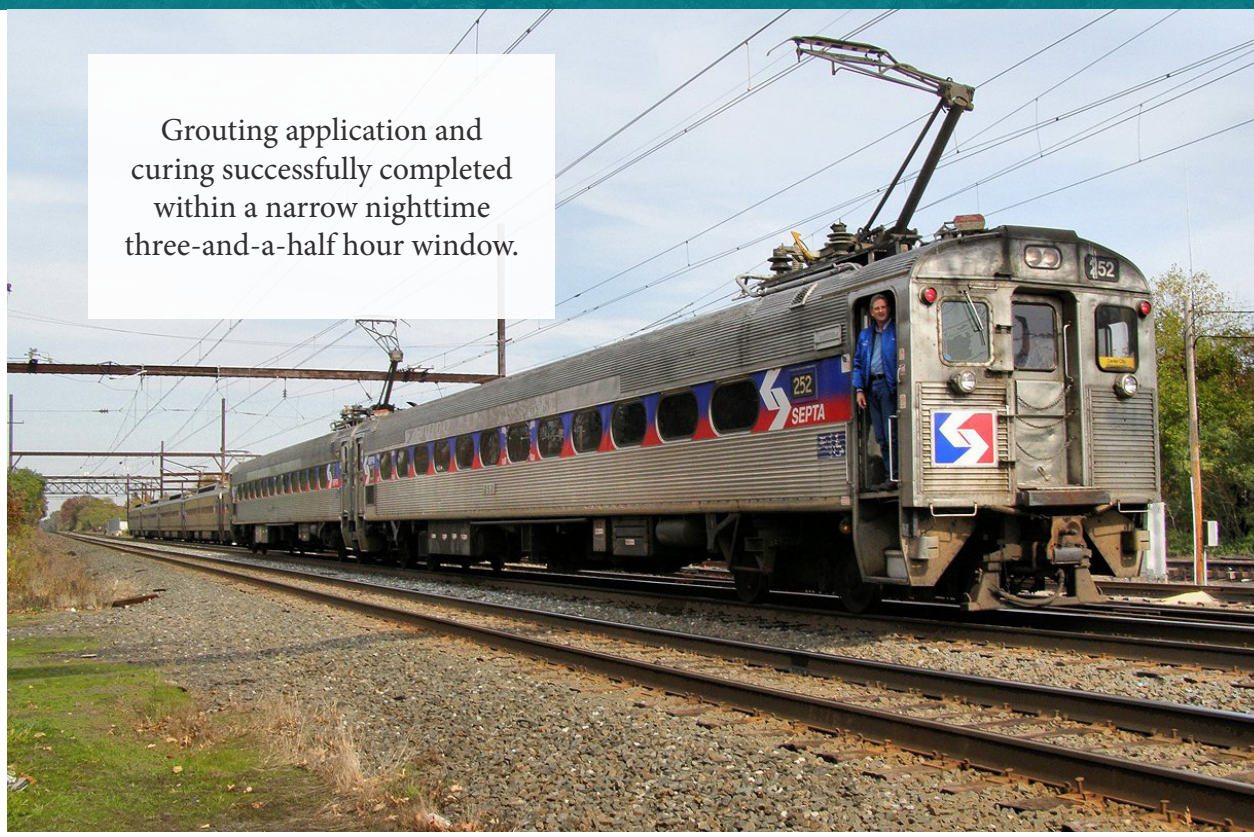
SOLUTIONS | Case Study



Grouting application and curing successfully completed within a narrow nighttime three-and-a-half hour window.

SEPTA Regional Rail
Train Trestle Baseplate Repair Project

Media/Elwin Line, PA

Product:

Five Star® Fluid Epoxy Grout

SEPTA Regional Rail Train Trestle Baseplate Repair

Date of Project: May 2017

Project Owner: Southeast Pennsylvania Transit Authority (SEPTA) Regional Rail

Project Contractor: Neshaminy Constructors, Inc.

Project Engineer: Gannett Fleming, Inc.

Market/Environment: Infrastructure / Railroad

Substrate: Concrete

Size of Project: 12 pedestals

Five Star® Fluid Epoxy Grout

Fluid, Self-leveling consistency

This two component, all-purpose, rapid cure fluid epoxy system is designed for adhesive grouting, anchoring, anchor bolts, setting of bolts and wedges, and small repairs to concrete.

- Excellent adhesion to steel
- High early strength
- Chemically resistant
- Good impact resistance

The Challenge

The Southeast Pennsylvania Transit Authority (SEPTA) Regional Rail discovered a hazardous issue with their eighty-year-old railroad trestles. Due to weather, age and wear, many of the original concrete footers exhibited erosion voids under the original baseplates. The contractor faced three major issues with this repair; small, shallow voids to be filled, a narrow application and curing window, and cool weather. SEPTA would only allow the contractor to pour and cure the material while the trains were not running; a short three-and-a-half hour window between the hours of 1:00 AM to 5:30 AM.

Five Star® Solution

Because it addressed all these challenges, Five Star® Fluid Epoxy Grout was chosen for this project. Prior to product placement, conferences were held between the engineering firm, contractor, independent testing lab - Applied Testing & Geosciences, LLC, and Five Star personnel to ensure the project's success.

To reach the required 11,000 psi compressive strength in three hours, the material was mixed and allowed to sit in containers for fifteen to twenty minutes. It was monitored with heat guns and only placed under the baseplates once it had reached 100°F (38°C) in the cans. By allowing the material to exotherm for a brief period of time in the cans, the curing process was expedited and the placed product was able to reach acceptable compressive strengths in the allotted time.

FIVE STAR® SERVICES

- Design-A-Spec™ engineering specification assistance
- Technical on-call center with field and project experienced staff
- Field support representatives for on-site consultation
- Corporate research laboratory available to customize products for unique applications

For worldwide availability, additional product information and technical support, contact your local Five Star® licensee, distributor, local sales representative, or you may call the Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.

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