

Grouts

Reactive Resin Grouts

Market Power Industry

Market segment Alternative Energy

Sub-segment Wind Power

Project Cowley North Wind Project

Products Sikadur VPC and Sikadur Injection Gel Fast Set

Existing situation Installation of a 46 m wind turbine, meteorological tubular tower.

Challenge To offer grouting material that will provide the required structural stability in a short period of time and shim bedding material for the setting of shims prior to the installation of the tubular tower

Solution Sikadur VPC meets the compressive strength requirements (50 MPa in 24 hours) and Sikadur Injection Gel Fast Set was used as bedding material.

Construction

When the winds start to pick up Time is a key factor



During this windmill installation, one of the biggest challenges was the wind! The grouting had to be completed before 10:00 am, when the winds started to pick up. Pouring of Sikadur VPC structural grout started at 7:00 and was completed by 8:30. The windmill base needed to be strong enough to provide the required structural stability by 10:00, for the tower installation. Sikadur Injection Gel Fast Set was applied to create perfect bedding. Once everything was levelled in place, Sikadur VPC

was poured in. It's strong compressive strength and fast cure provided the required stability for the base and ready to accept the windmill tower.

The Sika Solution with Sikadur VPC and Sikadur Injection Gel Fast Set

- Fast Turnaround
- Good shim bedding material
- Compressive strength of 50 MPa in 24 hours
- Fast cure
- High modulus, high strength, structural paste adhesive



Sikadur VPC

Universal Rapid Polymer Concrete

- Can be placed down to -40°C and provides a fast cure reaching high strength within a few hours at sub-zero temperatures.
- Suitable for rail base pads, tower bases and structural repair work.
- Excellent abrasion resistance and thermal compatibility with concrete; ideal expansion joint nosing material.
- High chemical resistance.
- Fast turnaround of heavy industrial floor and containment areas in aggressive environments.

Sikadur Injection Gel Fast Set

High-modulus, high-strength, structural, non-abrasive, smooth epoxy paste adhesive

- Its non-abrasive texture permits application with pumps or automated pressure injection equipment.
- Insensitive to moisture before, during and after cure.
- Excellent lubricity for deep penetration.

Other related products

Sika Grout 212 HP

Structural grouting of machine base plates

High-performance, non-shrink, cementitious grout

- Use on grade, above and below grade, interior and exterior applications.
- Versatile, can be applied in any consistency
- Superior freeze/thaw resistance

Sika PowerFix 3^{TU} Fast

Anchoring gel for setting shims

General-purpose, non-sag, injectable anchoring gel

- For use in damp or water-filled holes
- Fast-setting and strength-producing adhesive
- Unique, non-abrasive texture permits application with manual and automated pressure injection equipment.

Sikaflex 1a

Joint sealer between grout and base plate/contraction joint sealer

One-component, premium-grade, high-performance, moisture-cured, polyurethane-based, non-sag elastomeric sealant

- Designed for all types of joints with maximum depth of 13 mm and a maximum expansion of 25%.
- Suitable as an elastic adhesive between materials with dissimilar thermal coefficients of expansion.
- High elasticity-cures to a tough durable, flexible consistency with exceptional cut and tear resistance.

Sika AnchorFix 2^{TU} Cold Weather Epoxy Acrylate Hybrid Anchoring Gel

This new 100% solids, solvent-free structural epoxy acrylate hybrid anchoring gel has been engineered to gun at -21°C (-5°F).

Benefits

- Works below -18°C (0°F)
- Guns to -21°C (-5°F)
- Sets up quickly in damp and water-filled holes
- High early strength
- Styrene free
- Meets ASTM C881, Types I, II*, IV & V*; Classes A, B & C; Grade 3

* With the exception of gel time

Usage

- Heavy duty anchoring of rebar, threaded rods and epoxy coated smooth dowels in all concrete, brick or stone masonry.
- Best choice for structural bonding of heavy loads.
- Grouting bolts, dowels, pins, vertical and overhead, where extremely rapid setting, fast turnaround times are needed.
- Performs in damp or water-filled holes.



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