CASE STUDY

VORTEX

FEATURING

GeoKrete® BY VORTEX

GEOKRETE® GEOPOLYMER THE PREFERRED CHOICE TO REHAB 40 MANHOLES IN SINGAPORE

Sewerage System Rehab and Upgrade Utilizes GeoKrete for Manholes

PROJECT SNAPSHOT

Project
- Rehabilitation of Sewerage Network System: Phase 4 - Eastern Area Contract 2

Location
- East Coast Area, Singapore

Problem
- Excessive I&I, and corrosion

Solution
- Quadex®'s GeoKrete® Geopolymer spray-applied to 12mm thickness to achieve desired structural integrity and corrosion protection. Troweled to a smooth finish.

Contractor
- PMPS Liner Technologies (s) Pte Ltd,
  140 Tagore Lane
  Singapore
  787560
  Mr. Jackie Yeo: CEO
  jackie@pmpsliner.com

Project Time Frame
- 4 months

Contact
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CERTIFIED REDUCED CARBON FOOTPRINT SUSTAINABLE PRODUCT

Compared to Baseline for Trenchless Repair Systems for Structural Rehabilitation of Civil Infrastructure

SITUATION: LEAKING AND CORRODED CONCRETE MANHOLES

As part of a much larger project, where over 28km of pipe was being rehabilitated on the East coast of Singapore, 40 manholes were also found to be in need of restoration to arrest I&I and corrosion. Once completed, the newly rehabilitated Sewerage Network System would not only be free of I&I and corrosion, but will also have increased capacity.

GEOKRETE CHOSEN FOR COST-EFFECTIVENESS, EASE OF USE AND POSITIVE TEST RESULTS

The workers particularly liked the ease of application and the lack of "fall-down" of GeoKrete when compared to other materials. GeoKrete also performed well in 3rd Party testing and the contractor, PMPS Liner Technologies, also demonstrated how easy it was to apply. With those two important factors, GeoKrete was approved. All 40 manholes were rehabilitated over a four month period. To ensure a smooth and consistent wall thickness, a special designed, chain driven, spin-casting spray apparatus was developed. Mounted on a tripod, then centered over the manhole opening, the apparatus is lowered, then raised up and down the manhole until the desired thickness is achieved.

Manhole Before

Manhole After