

# UCT The Underground Utilities Event



Underground Construction Technology | January 28-30, 2020 | Fort Worth, TX



# How to Fix a Problem Repair

Bill Shook  
Past President NASSCO



## What Types of Defects are Problems?

- ✓ CRACKS
- ✓ BLISTERS
- ✓ LEAKS
- ✓ DELAMINATION
- ✓ PINHOLES
- ✓ SURFACE
- ✓ VACUUM TEST
- ✓ DISBONDING
- ✓ INSUFFICIENT THICKNESS
- ✓ SPALLING



# Hydration Cracks





## Cracking from Movement





## Inadequate Thickness



# UCT The Underground Utilities Event



Underground Construction Technology | January 28-30, 2020 | Fort Worth, TX





# Fractures & Delamination





# UCT The Underground Utilities Event



Underground Construction Technology | January 28-30, 2020 | Fort Worth, TX



# FOUR COMMON MANHOLE REPAIR METHODS

STRUCTURAL CONCRETE LINERS

PROTECTIVE COATINGS

POLYMER LINERS

CIPP MH LINERS



Why is NASSCO willing to discuss installation problems?

NASSCO is dedicated to improving our industry through inspector training, defect identification, operation manuals, specifications, industry standards and technology promotion. Better knowledge and high standards ensures successful projects and the more successful projects there are, the more projects engineers and cities are willing to specify member's solutions.

NASSCO has sponsored many seminars that address the basics of MH repairs and the many solution choices engineered to solve specific problems. This presentation focuses on what to do when those solutions have problems. We reason that engineers and cities gain confidence in the methodologies and the installing contractors when they understand that repairs to the repair can be effectively made without compromising quality.



# Questions?

