On-Site Manufactured Continuous Pipe

Mo Ehsani, Ph.D., P.E., S.E.
President, QuakeWrap, Inc., and
Centennial Professor Emeritus of Civil Engineering, U. of Arizona
Current Pipeline Practice

- Pipes made in 20-40 ft long segments
- Transportation is costly
- Joined in the field
- Safety
- Corroding Materials
- Provide coating or cathodic protection
- Leaking Joints
Continuous On-Site Manufacturing

- Two Distinct Techniques:
  - Concrete
  - Sandwich Construction FRP

- Both Techniques:
  - Eliminate Shortcomings
  - Lower Cost
  - Green & Sustainable
Horizontal Direction Drilling (HDD)

- For new pipes going under freeways, rivers, etc.
- Requires large laydown area
- Inefficient in transporting & assembling pipe segments
Onsite-Manufactured Concrete Pipe
Sandwich Construction FRP Pipe

Close-up view

Outer Layer of Fabric
Lightweight Core
Inner Layer of Fabric
Gillies Road Culvert

Cairns, QLD
Gillies Road Culvert

Cairns, QLD
ASCE 2016 Innovation Award

StifPipe®: winner of 2016 ASCE Innovation in the category “Green Engineering”

Awarded to
MOHAMMAD REZA EHSANI, Ph.D., P.E., S.E., F.ASCE
President, QuakeWrap
Tucson, AZ

“StifPipe®: A Green-Sustainable Solution for Repair and Construction of Pipelines”

Copyright © - QuakeWrap, Inc. 2017
Mobile Manufacturing Unit (MMU)

- First Prototype Completed
- Produces 1 ft/min (2 miles/week)
Mobile Manufacturing Unit (MMU)

- First Prototype Completed
- Produces 1 ft/min (2 miles/week)
InfinitPipe®: On-Site Manufactured Pipe

Mo Ehsani, Ph.D., P.E., S.E.
Professor Emeritus of Civil Engineering, University of Arizona
President, QuakeWrap, Inc.

October 2014
Potential Applications

- New pipelines (water, sewer, oil, gas)
- Slip-Lining Culverts
- Slip-Lining Corroded Subsea Pipeline
- Hyperloop
- Great Barrier Reef
Bleaching of Great Barrier Reef

- Reef lost 50% of its coral cover from 1985-2012 (Australian Inst. of Marine Science)
Bleaching of Great Barrier Reef

- Reef lost 50% of its coral cover from 1985-2012 (Australian Inst. of Marine Science)
Bleaching of Great Barrier Reef

- Reef lost 50% of its coral cover from 1985-2012 (Australian Inst. of Marine Science)
Thank you for your Attention!

Questions?

Email: Mo@QuakeWrap.com

Follow us through social media:

QuakeWrap.com  PileMedic.com  PipeMedic.com