

TIMBER PILE REPAIR • STEEL PILE REPAIR • PRECAST PILE REPAIR



# Fabriform<sup>®</sup>

Tailored Solutions for Concrete

# Fabriform Pile Jackets



*Above: Cutaway view showing the original cement pile (inner octagon) and the new Fabriform concrete pile (outer circle).*

## THE CHALLENGE

Piles in marine environments suffer extreme damage as a result of constant exposure to wind, sea salts and wave action. Extensive corrosion and abrasion often leads to severe deterioration that compromises integrity and threatens service life. Additionally, increased load demands on marine and waterfront structures can exceed original design criteria, creating safety concerns.

What is required is a system for repairing, protecting and upgrading the piles, platform legs and bracing that support these structures. Construction Techniques, Inc. offers a proven solution through the use of a unique process of casting structural shapes by pumping mortar into water permeable nylon fabric forms.

## THE SOLUTION

Fabriform Pile Jackets offer an economical, adaptable and durable alternative for repair and strengthening submerged structural members. The forms are made of lightweight fabric, eliminating the need for mechanical handling equipment. In addition, Fabriform Pile Jackets are assembled to the exact length and diameter specified for fast installation, ease of placement, operational flexibility and minimal logistic requirements. The result is significant economies and a superior repair of steel, concrete and timber piles subject to demanding marine environments.



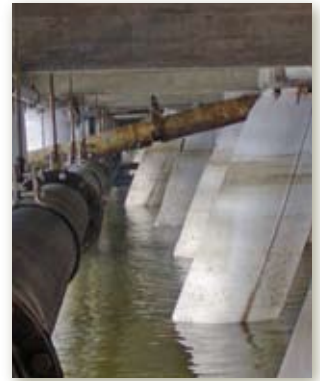
*Left: An on-site installation of Fabriform Pile Jackets. Workers inject a concrete mixture into the fabric form.*

# Economical ◦ Adaptable ◦ Durable ◦ Easy to Install

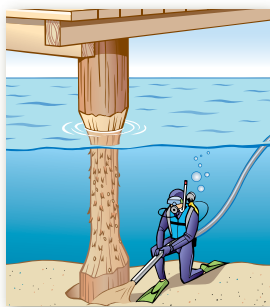
## HOW IT WORKS

The Fabriform Pile Jacket forming process utilizes zippered fabric sleeves that are placed and secured around the pile or structural member. The high strength synthetic nylon is woven to create a water-permeable fabric that serves as both a filter and a form. A concrete mixture of cement, aggregates, water and admixtures proportioned to provide a flowable mix is pumped into the form through hoses. Excess mixing water is forced through the fabric as a result of pump pressure. This controlled bleeding produces a low water-to-cement ratio concrete that exhibits rapid stiffening, high strength, increased durability and improved abrasion resistance. The fabric form remains bonded in place, eliminating the costs associated with form stripping and providing additional protection from abrasion.

In installations where the jacket is to extend below the mud line, the sea floor is excavated to permit installation over at least one foot of sound pile (*Step 1, below*). The piles are then cleaned to produce a sound substrate (*Step 2*). Reinforcing steel and stand-offs are placed, if required (*Step 3*). The jacket is hung from a suspender ring, zipped closed and secured at the bottom (*Step 4*). External bands are then installed if required. Mortar is injected through two hoses extending to the bottom of the jacket (*Step 5*). The hanger assembly is removed and the job is complete (*Step 6*).

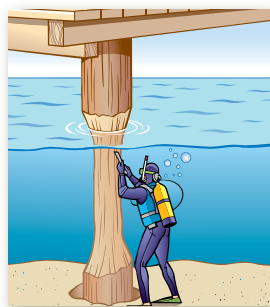


## SIX STEPS FOR FAST AND EASY INSTALLATION:



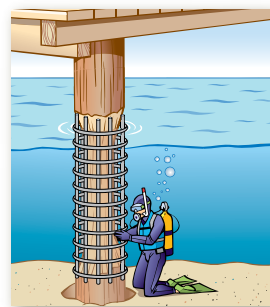
1

Excavate



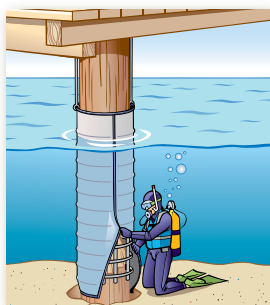
2

Clean



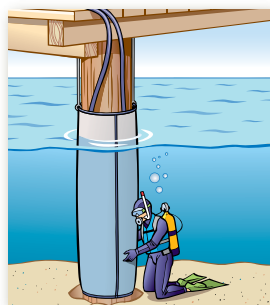
3

Reinforce



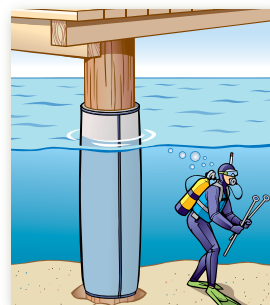
4

Hang Jacket



5

Inject Mortar



6

Reclaim Hanger

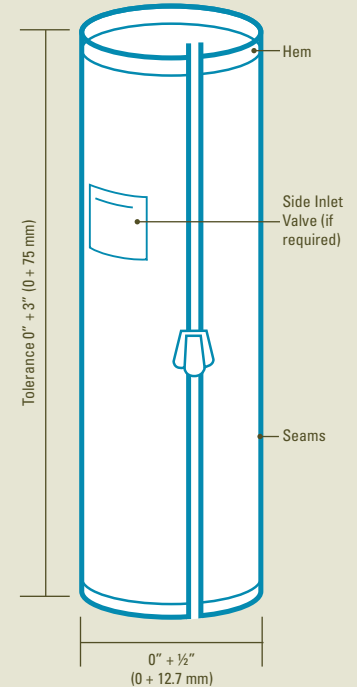
# Fabriform Pile Jacket

## Design and ordering information

Fabriform Pile Jackets are designed and woven specifically for structural applications and are custom assembled to meet exact length and diameter requirements specified for each project. All seams are folded and double stitched. Zippers are constructed with two-way brass teeth to aid in the installation of the jacket.

The line drawing shown at right may be helpful in determining the dimensions required for a specific installation. Specifications must include the length and diameter required, the size and location of side inlet valves (if desired), and any modifications to hems. Each jacket must be identified by pile and bent number.

Complete guide specifications and installation procedures, containing detailed information on manufacturing tolerances required for ordering, are available for Fabriform Pile Jackets. In addition, the Construction Techniques staff of experienced professionals can provide assistance in project specifications and ordering. Experts in the design, installation and manufacture of the Fabriform Process, they work to ensure a final construction of superior quality and maximum value.



## CONTACT INFORMATION

With over *100 years* of combined experience in the sale, manufacture and service of Fabriform products, the staff of Construction Techniques is well-prepared to advise you on your next project. Allow us to put our experience to work for you. For more information, contact us today or visit our web site.

ADDRESS 15887 Snow Road, Suite 100  
P.O. Box 42067  
Cleveland, Ohio 44142, USA

TELEPHONE 216.267.7310 / 800.563.5047  
FACSIMILE 216.267.9310  
EMAIL [bjakers@fabriform1.com](mailto:bjakers@fabriform1.com)  
WEB SITE [www.fabriform1.com](http://www.fabriform1.com)



a product of:  
**ConstructionTechniques**  
INCORPORATED