NOTE: Read these instructions thoroughly and refer to Technical Data Sheet prior to installation.

STEP 1

A. Clean existing pilings using a minimum of 4,000 psi high-pressure water blast or other mechanical means of cleaning piles of marine growth, rust, and other contaminants.

B. As directed by engineer, fill any gaps/joints with Five Star® Underwater Epoxy Gel.

C. To increase mechanical bond of cementitious grout when encasing piles, mechanically anchor rebar or studs to pile. Length of protrusion depends on annulus specified by the engineer.

STEP 2 (Optional)

A. Drill the appropriate sized hole into PileForm™ F jacket to match the diameter of the Pump Port using a diamond-tipped core hole saw.

B. Space Pump Port holes approximately every 5’ (1.5 m), or as specified, alternating hole placement on opposite sides.

C. Adhere threaded Pump Port to PileForm™ F jacket using Five Star® Underwater Epoxy Gel and allow adhesive to fully cure.
STEP 3

A. Seal the open end of the Pileform™ F Jackets using either soffit assemblies designed by the engineer, or 2” backer rod which will create a seal between the jacket and the pile after ratchet straps are tensioned in place.

B. Place PileForm™ F Jackets to desired elevation around the pile and apply Five Star® Underwater Epoxy Gel to all vertical or horizontal seams.

C. Once around the pile, engage the tongue and groove enclosure and secure using stainless steel self tapping/drilling screws spaced every 6 inches.

D. Then secure the installation using ratchet straps, around the circumference, every 12-18”.

E. PileForm™ F Jackets must be secured at the top and bottom of the forms to prevent sagging.

F. Install external bracing for the pile. The bracing is to be determined by the engineer.
STEP 4

A. Once bracing is in place and a 6" bottom seal is established using a suitable fill material and 2" foam backer rod, or similar, for a 1" annular space, begin filling the PileForm™ F Jackets with the specified fill repair material.

B. Depending on the application and as specified by the engineer, Five Star® Cementitious Underwater High Strength Grout, Five Star® Pile Jacket Epoxy Grout LPL, Five Star® Pile Jacket Epoxy Grout LV, or Five Star® Pile Jacket Grout HP may be appropriate.

C. Material can be placed by one of the following three options:

OPTION 1:

I. Use a peristaltic pump and start pumping from the bottom via pumping ports.

II. Once fill material is observed at level of next highest port, close valve on lower port, move to the next port, and continue pumping.

OPTION 2:

I. Use the pour method by pouring the material from the top of the jacket starting at one end and moving to the other.

II. In many cases pouring from both sides is used to ensure even filling.

III. Continue filling the PileForm™ F Jackets until repair material reaches within 1 inch of top and then stop.

IV. Do not allow material to disperse through the water more than 2 feet.

OPTION 3 (NOT DEPICTED):

I. Insert a tremie house into the jacket annulus and to the bottom of the repair area.

II. Begin pumping or pouring material into the tremie.

III. Do not allow material to disperse through the water more than 2 feet.
STEP 5

A. After the initial set of the fill material, fill the remaining head space up to the top of the jacket and create a 45° angle using Five Star® Splash Zone™. This will seal the top of the jackets preventing any water from getting between Pile-Form™ Jacket and fill, and will help prevent any problems as a result of freeze/thaw.

B. After the grout is set, remove external bracing.

C. Although most jackets are translucent, allowing the workers to watch encapsulation material fill the entire jacket on all sides, it is recommended that inspection workers ensure the entire pile jacket has been filled and no voids exist under the jackets.

D. If the decision has been made by the engineer to use removable PileForm™ Jackets, they can be removed at this time.

“General Deterioration Repairs” made with Fiberglass Jackets project a service life of 20-40 years...


For additional guidelines, refer to the PileForm™ F Design-A-Spec™.

Our field engineering experts can work with you to develop a solution that fits your needs. Contact the Five Star Products’ Engineering and Technical Service Center at 1-800-243-2206.
Pile Encapsulation System

- 45° BEVEL FIVE STAR® SPLASH ZONE™ COMPOUND
- 1/8", 1/4", 1/2" FIBERGLASS FIVE STAR® PILEFORM™ F JACKET
- WOOD/STEEL/CONCRETE PILE
- EPOXY OR CEMENTITIOUS GROUT FILL
- EPOXY COATED REBAR CAGE
- PILEFORM™ F FIBERGLASS JACKET
- WATER LINE
- NYLON RATCHET STRAPS EVERY 12-18"
- PUMP PORTS EVERY 5' ROTATING SIDES
- SELF TAPPING STAINLESS STEEL SCREWS EVERY 6"
- FIVE STAR® UNDERWATER EPOXY GEL
- SS SELF TAPPING SCREW EVERY 4-6"
- CONTOUR OF ORIGINAL PILE
- 6" BOTTOM SEAL
- BACKER ROD
- OCEAN FLOOR

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Five Star Products, Inc. is an industry leader in the development of systems and products designed for the rehabilitation and stabilization of marine facilities and underwater structures. All of our products are designed and field-tested by experienced commercial divers and engineers with an emphasis on ease of installation, reliability, safety and consistency.

From preventative measures to full structural rehabilitation, Five Star's comprehensive range of products and services offers the solution you need for today's harsh marine environments. With an outstanding track record of customer satisfaction, our staff of committed, experienced personnel is available for job site assistance whenever needed.

Five Star Products, Inc. has been a top-tier supplier of high-performance cement and epoxy-based products for the industrial, infrastructure, commercial and marine markets since 1955.

For worldwide availability, additional product information and technical support, contact by our local Five Star sales representative, or call Five Star Products' Engineering and Technical Service Center at 1.800.243.2260

Custom is Our Standard

Specializing in Custom Fiberglass Jackets & Forms

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