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**FREE  
Membership and  
Laminate Certification  
Manual**

August 6, 2010

Dear Water and Wastewater Treatment Plant Engineers and Consultants:

I'm writing on behalf of the Fiberglass Reinforced Plastics Institute (FRPI) to tell you about a way to obtain high-quality fiberglass products in the wastewater and water industry. I became involved in this non-profit organization because – like the other engineers, fabricators, and wastewater district engineers on the FRPI Board of Advisors – I have found that wastewater and water treatment components made of fiberglass-reinforced plastic (FRP) work very well if strict specification, fabrication, and installation procedures are followed.

While most people in our industry have heard the “horror stories” of FRP installations failing prematurely, FRP is one of the best materials of construction available to our industry. FRPI was created to address fabrication concerns by providing a verification process that delivers high laminate quality and product longevity.

FRPI developed specifications and quality-verification practices after soliciting input from engineers, fabricators and end users of FRP products. With their help, we developed this quality verification process, which will be refined and improved through application by wastewater and water industry experts. See the FRPI introduction enclosed, with frequently asked questions and answers.

This is where you come in. You can assist us in this process by using FRPI practices. For a limited time, FRPI will waive the membership fee, open member benefits access and provide a free Certification manual download via the member's website portal for you to review and specify. Simply send a request to [contact@frpi.org](mailto:contact@frpi.org).

If you prefer, you can contact me directly at Tech Environmental by email at [mlannan@techenv.com](mailto:mlannan@techenv.com) or by calling (781) 890-2220, extension 33, and I'd be happy to answer any questions you may have.

Sincerely,  
FIBERGLASS REINFORCED PLASTICS INSTITUTE, INC.

Michael T. Lannan, P.E.  
Vice President and Board of Advisors Chairman





**The Fiberglass Reinforced Plastics Institute** is a non-profit industry group founded in 2003 and dedicated to the reliability of FRP wastewater and water equipment performance.

Industry failure studies have shown that about 70% of the causes for failure result from manufacturer-related capability deficiencies, while 39% of the types of failure result from laminate degradation stemming from these deficiencies. FRPI offers Laminating Process and Laminate Certification as a solution to prevent these causes of failure.

Most fiberglass failure experiences can be traced back to materials-related root causes. Certification substantially lowers the risk of material failure issues and provides reliable laminate performance through simple-to-specify quality verification practices.

In order to help you better understand the benefits and process of FRPI, here are some frequently-asked questions and answers.

### **Does FRPI Certification replace ASTM and ASME industry standards?**

No. Standards provide industry design and fabrication minimums that establish rules for safety. However, these standards do not establish good, better or best performance alternatives for the equipment Owner and specifying Engineer making or recommending a purchase.

The FRPI Certification process picks up where industry standards leave off. Certification bridges the gap from minimum standards for mechanical engineering, fabrication and quality control to sound laminate manufacturing and reliable equipment performance.

### **Are there parallels to the FRPI process in other industries?**

Laminate Certification is very similar to a proven quality verification process used in the steel industry for generations. Whereas the steel industry assigns a “Heat Number,” FRPI assigns a “Registration Number” to finished material.

FRPI Certification, like metal certification in the steel industry, provides specifiers with confidence that their equipment will be fabricated with quality material manufactured per contract specifications. Gaining this confidence is unachievable through simply referencing industry standards in the fiberglass industry.

### **How does FRPI Laminate Certification work?**

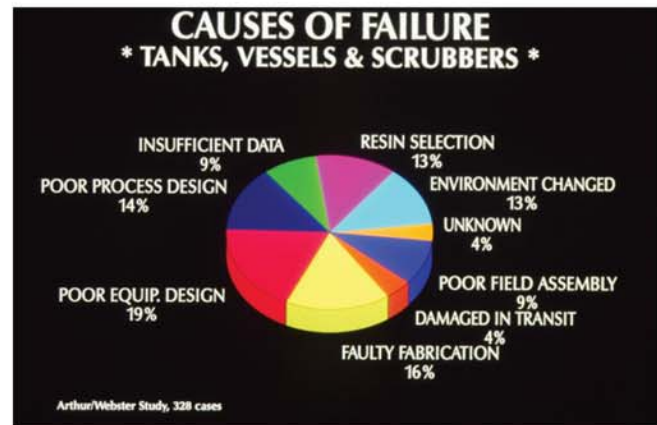
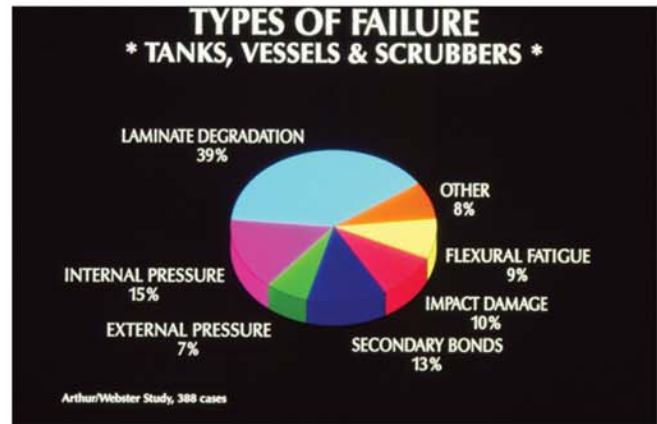
Laminate Certification is a three-step process performed on a job-by-job basis. Certification validates design, materials manufacturing and installation. FRPI representatives review the Manufacturer’s engineering submittal to confirm a materials design audit trail exists, and validates materials to be manufactured meet contract specifications. Once the laminating process has begun, FRPI representatives validate through inspection and testing of cutouts from production run laminates that materials manufactured meet validated Manufacturer submittals. Finally, FRPI representatives review the Manufacturer’s inspection records, operation and maintenance manual and certificate of proper installation, validating installation conformance with contract specifications. If each of the three steps results in approval, then FRPI issues Laminate Certification.



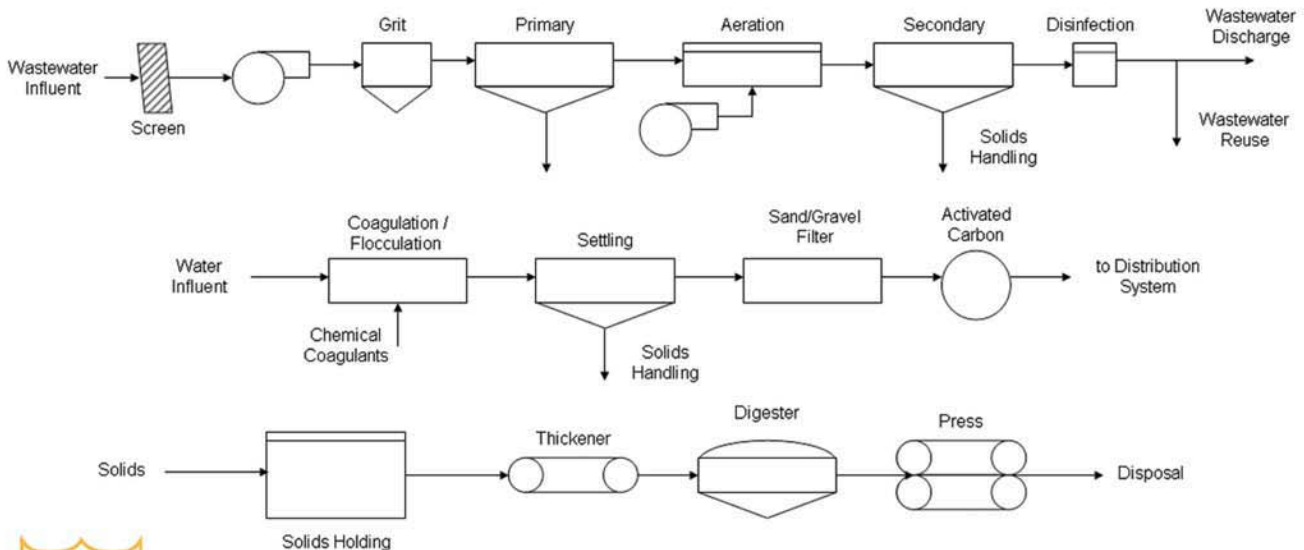
*FRP chemical feed tanks were supplied to the Upper Blackstone Water Pollution Abatement District with FRPI Certification. District Engineer Karla Sangrey was so satisfied with the results that she joined the FRPI Board of Advisors.*

## Why FRPI certification?

FRP is an extremely corrosion resistant, mechanically sound and versatile construction material. Unfortunately, its versatility can complicate the process of obtaining quality and result in costly equipment reliability issues if the specification, design, materials manufacturing and installation are not performed properly. The FRPI certification process offers a standardized approach for the wastewater and water industry. Experts in the FRP and water industry have volunteered their time to FRPI to help develop this standardized approach. The cost of this QA/QC process will add approximately 3 to 8% to the cost of materials. The steel industry and other materials manufacturers already include these mark-ups in the fabrication process. This “added cost” is a small price to pay to obtain a reasonable lifespan for wastewater and water components. Please consider using FRPI certification on your next project that requires long-term, corrosion resistant and mechanically sound components, including many of those listed on the diagram below.



1. Tanks and Vessels
2. Ducts and Appurtenances
3. Fans and Blowers
4. Flat and Dome Covers
5. Overflow Channels and Weir
6. Ladders and Walkways
7. Grating and Diamondplate
8. Hatches and Baffles
9. Odor Control Units
10. Chemical Addition Systems



**Where does fiberglass work in water and wastewater treatment?**