



**Fiberglass Reinforced
Plastics Institute, Inc.**

Eliminating Risks Since 2003

What Risks? Premature FRP flange/nozzle failure resulting in impaired “level of service”.

The Product Proving Grounds at FRPI



Some things we know at FRPI are that every Manufacturer claims to deliver quality, flanges are not created equal, and product performance falls short of expectations all too often. Fiberglass flanges and nozzles are very robust when properly engineered, laminated, installed and coupled to equipment. As with other materials though, performance is compromised and premature failure is seeded with only one deviation from the start of good engineering to completing flange coupling plus misapplication.

When engineering fiberglass process equipment, it is a common practice to isolate it from dead and live loads. Proper flange alignment, face seating, gasket selection and bolt torque is also very important during coupling. If over stressed by connected fixed and rotating equipment, flange misalignment and over torqueing plus thermal expansion and contraction, then at best these loading conditions will lead to long term creep or fatigue that eventually results in mechanical damage. This premature failure condition is accelerated by inadequate product quality.

Fiberglass is a complicated mostly handmade material that has a low tensile elongation and does not yield under stress like other materials. So, it is not as forgiving of human errors and omissions at any step in delivering quality. To eliminate risks of premature flange and nozzle failure, or failure of any system component for that matter, a great specification is required. A great spec gets the right Manufacturer onboard plus puts them into a position to deliver certified quality from engineering thru manufacturing to installation. [Get and use the FRPI specs now, they get results!](#)

Duct Flange Failures



Tank Nozzle Failure



Your Odds of Premature Failure
If not using a great spec: 1 of 3 to 3 of 5
bids lead to spec compliance issues or
30 to 60% risk exposure probability!