



STEELHEAD COMPOSITES

Steelhead Composites is an engineering platform company specializing in lightweight composite pressure vessels and hydraulic components for weight sensitive, energy and fuel storage applications.

Our patented technologies and engineering expertise enables us to offer customized design services and manufacturing services in addition to the product suite of accumulators (bladder, diaphragm, piston), CNG cylinders, hydrogen vessels

- Safely manufacture highest-quality products
- Rapid execution in order to deliver defect-free products on time
- Continuous innovation to improve quality and decrease cost
- Environmentally conscious manufacturer
- Respectfully interact with others
- Ethically treat all employees

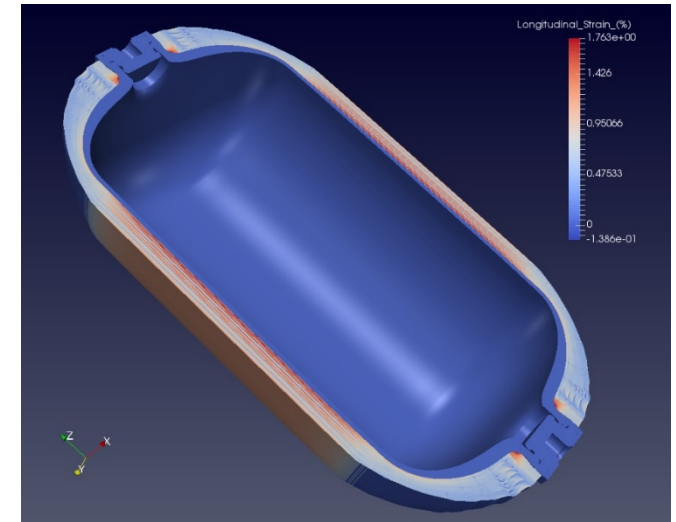
COMPANY PROFILE

- Engineering platform company founded in 2012; In production since 2014
- Capital efficient, scalable manufacturing in Golden Colorado
- Significant IP in processes, programs and patents
- Small and nimble
- DOT, CE & ISO certifications on products
- Full service engineering, testing, prototyping & production
- Global customers in aerospace, defense, automotive, space, robotics, marine and oil and gas
- Ability to do contract design and manufacturing of non-vessel composite structures



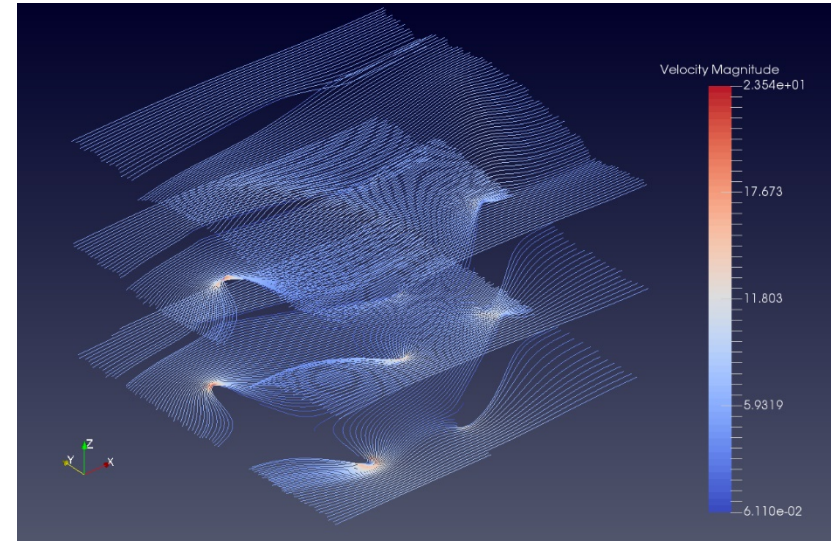
COMPOSITE PRESSURE VESSELS

- Established name in manufacturing unique, high pressure vessels
- Willingness and eager to partner with IACMI and DOE team members
- Design and analysis capabilities
 - Composite pressure vessels
 - Composite structures
- Contract fabrication capabilities
 - Filament winding
 - Spinforming
 - Testing
- Testing
 - Burst
 - Cycle
 - Composite characterization



VERTICAL AXIS WIND TURBINES

- Engaged in a prototyping-to-mass production feasibility study
- Design and analysis capabilities
 - Computational Fluid Dynamics
 - Fluid-structure interaction
- Composite fabrication capabilities
 - Filament winding
 - Resin transfer molding
 - VARTM
- Full design -> prototype -> testing -> production abilities in one site



COMPOSITE ACCUMULATORS

Accumulators are a staple of the hydraulics industry; the battery of a hydraulic system, while composites are known for their excellent strength to weight characteristics

Steelhead Composites is the first company to offer a novel approach to hydraulic accumulators by utilizing the advantages of composites to displace traditional materials like steel



Diaphragm

Smaller accumulators with an elastomeric diaphragm, used frequently in automotive and pulsation dampening applications



Bladder

Larger, fast acting, lower cost accumulators with a rubber bladder separating the gas and fluid. Used in most industrial applications



Piston

Commercially available in Q1 2017. Uses a piston to separate the fluid and gas sides. Provides higher rates of flow and operation in versatile applications

HYDROGEN STORAGE

Fuel cell vehicles are a zero-emission automobile using hydrogen gas to power an electric motor and allow shorter refuel times and greater driving distances than electric cars.

With estimates of 20 million fuel cell vehicles being sold in 2032 representing a \$1.2 trillion market, Steelhead has differentiating technology in hydrogen storage and positioned to be competitive in this huge potential market.



Smart Tank Technology

Steelhead vessels offer improved fast-fill with negligible permeation and embedded telematics for real-time tank health monitoring

High Pressure or Cryo

The market is moving to the very high pressure standard of 700 bar or cryo compressed; both of which Steelhead has designs to handle

In-tank Regulator

700 bar is very high pressure. By enabling in-tank pressure regulation via our patented large ports, we decrease system cost and improve safety

www.steelheadcomposites.com