

**T/F** TAYLOR FORGE  
ENGINEERED SYSTEMS



# Engineered Solutions

Starting with a collaborative, consultative approach, we work to understand the unique needs of a project in order to deliver the best solution.

- **Integrity in Design**

We have developed industry leading best practices that provide our customers with extremely safe and reliable solutions and products.

- **Achieving Optimal Solutions Through Collaboration**

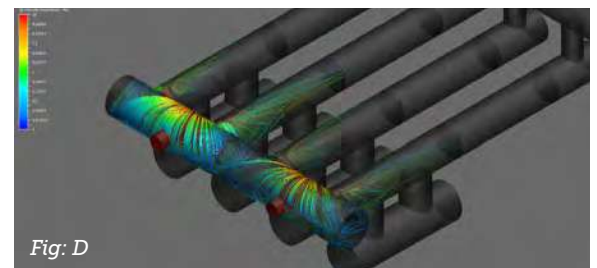
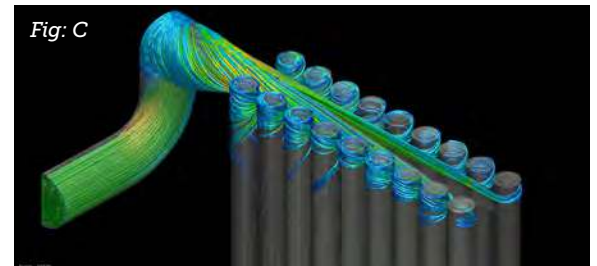
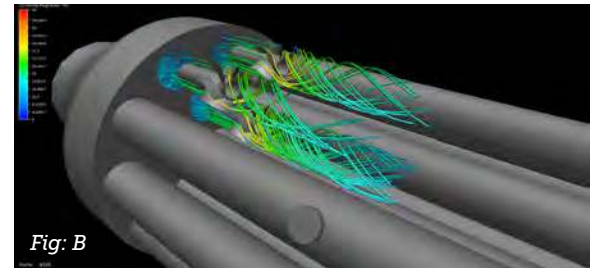
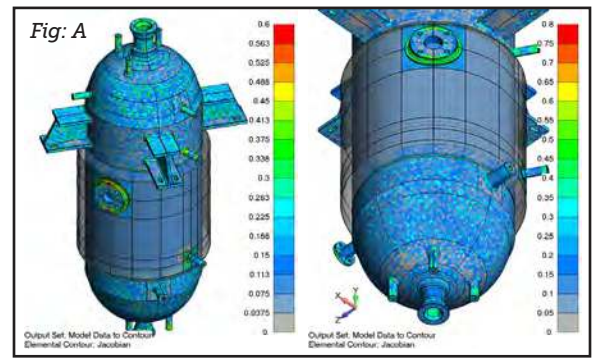
Early in the design phase, our staff of professional engineers work directly with our customers to evaluate all options and ultimately provide the most optimal solution for their needs.

- **Creativity in Design**

In an industry with great history and standardization, we provide a fresh and innovative approach to traditional products.

- **Engineered 3 D Modeling & Flow Analysis**

Engineers and designers working together for the most efficient, reliably designed end product.

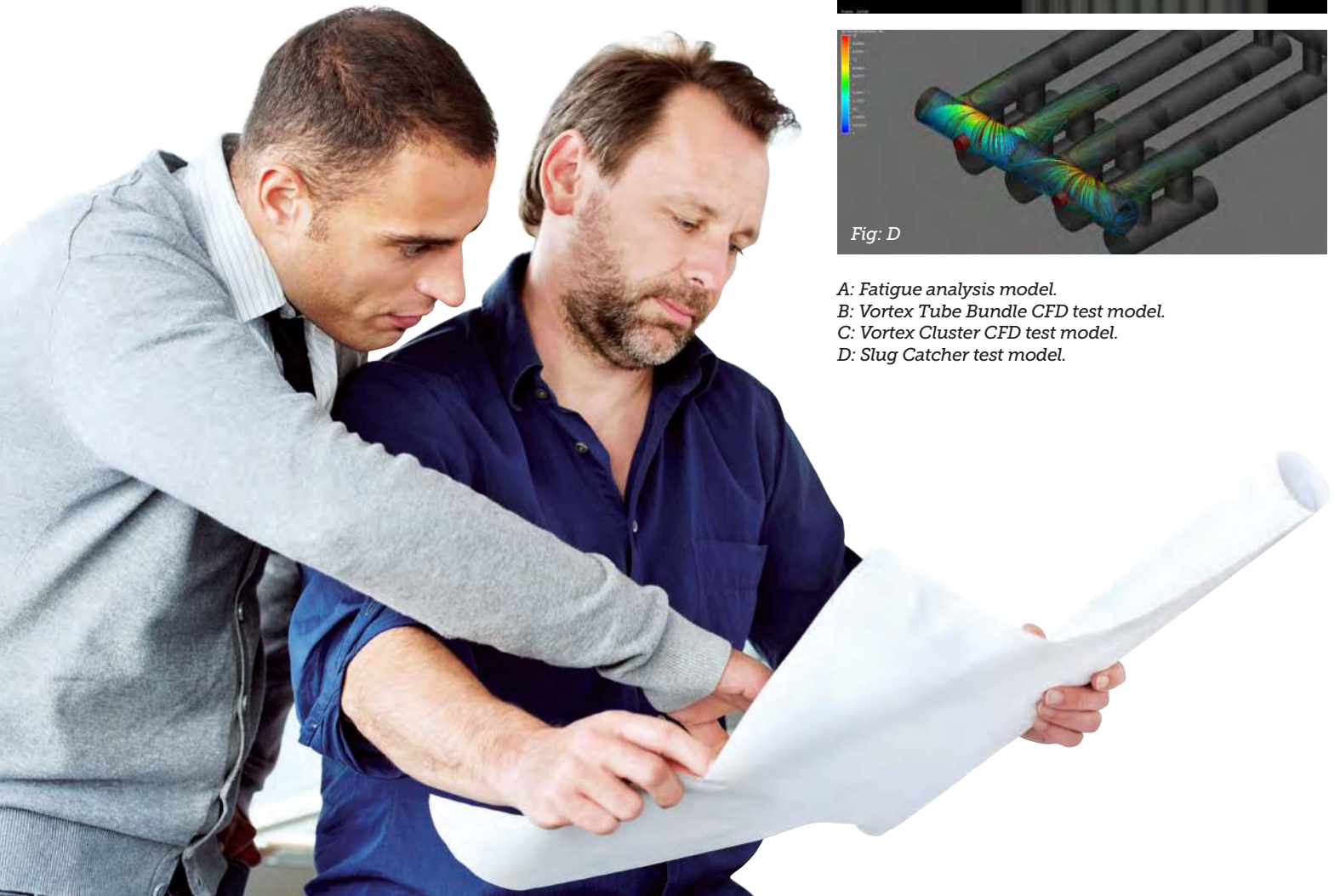


A: Fatigue analysis model.

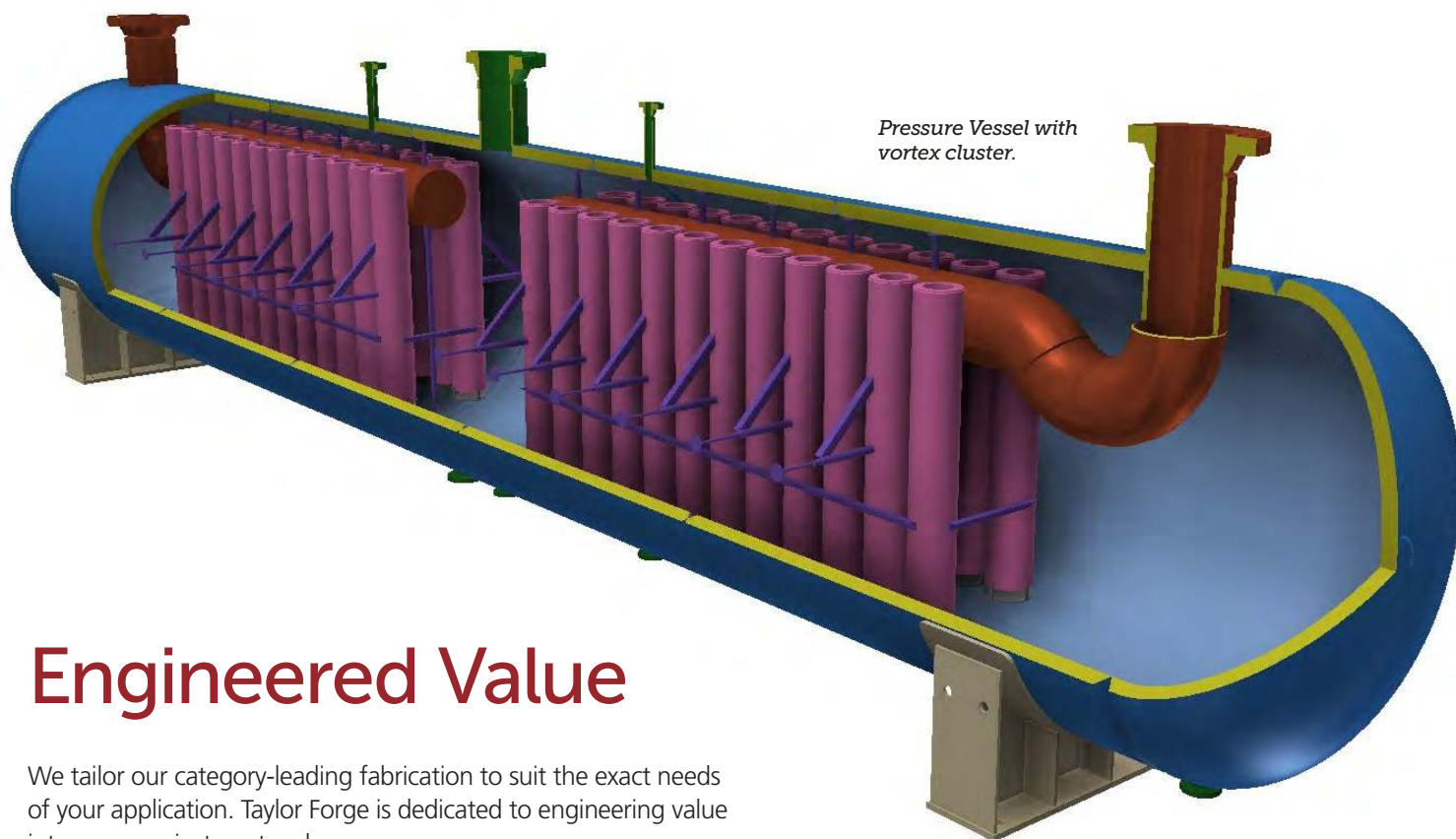
B: Vortex Tube Bundle CFD test model.

C: Vortex Cluster CFD test model.

D: Slug Catcher test model.



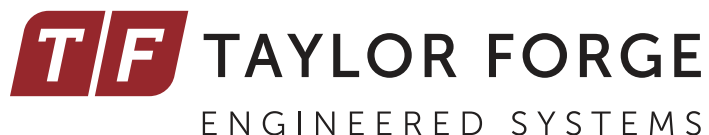




## Engineered Value

We tailor our category-leading fabrication to suit the exact needs of your application. Taylor Forge is dedicated to engineering value into every project we touch.

- **High Quality Designs lead to High Quality Products**  
It all starts with collaboration, planning, design details and implementation at the highest engineered level.
- **Industry Recognized Process Guarantees**  
Because of our designs and deliveries, we are the industry recognized leader.
- **Metallurgical Excellence**  
Our expertise in metallurgy and welding has been crafted and engineered for over 100 years.
- **Welding Technology is our Science**  
We are the most advanced welding experts in our field.  
  
We perform R&D, certified testing, and have qualified over 1,000 welding procedures.
- **Fluid Dynamic Flow analysis and Structural Design**  
We invest in the best software and personnel to understand, test and provide design excellence.





## Slug Catchers

We efficiently engineer 2-phase or 3-phase separation ahead of your processing facility. The proper design of this critical piece of equipment can impact the rest of the facility. By designing for pigging and transient slugs to arrive at full gas flow, we work with you to ensure the best facility performance with the use of our equipment.

### Vessel Type Slug Catchers

The economical choice up to approximately 1000 bbls (165 cu m) of liquid storage. Typically installed without process internals in slugging applications. Vessels can be supplied designed to ASME Sec VIII Div 1 or 2.



### Pipe Type Slug Catchers

Also called "Harp Type", or "Finger Type". Very flexible design with almost unlimited capacity potential. Units have been installed over 4 BSCFD of gas flow and over 50,000 bbls (8,000 cu m) of liquid storage. Plot space limitations can be optimized. Turnkey scope including installation is available.

## Vortex Technology Separation

By utilizing our unique Vortex Technology separation elements, very high separation efficiency can be achieved (down to 1 micron particles). Using this technology can result in vessel size and weight reductions up to 30%. It can also be retrofitted into existing separators where gas flows need to be increased or operating pressures have dropped.



## Shell & Tube Heat Exchangers

Our new 53,000 sqft. state-of-the-art fabrication facility focuses on process and heat transfer packages. Our exclusive In-House Thermal Design and Engineering team will design to the latest requirements including HTRI, TEMA "R", "C", and "B", as well as, API 660 standards. Our heat exchangers, condensers, reboilers, and evaporators will be fabricated to the highest level of quality standards for our customers peace of mind.

*Pipe Type Slug Catcher with Vortex Tube Scrubber. Listening to our customers specific needs allowed our design team to provide the client with a customized solution to their gas/liquid handling and storage challenges.*

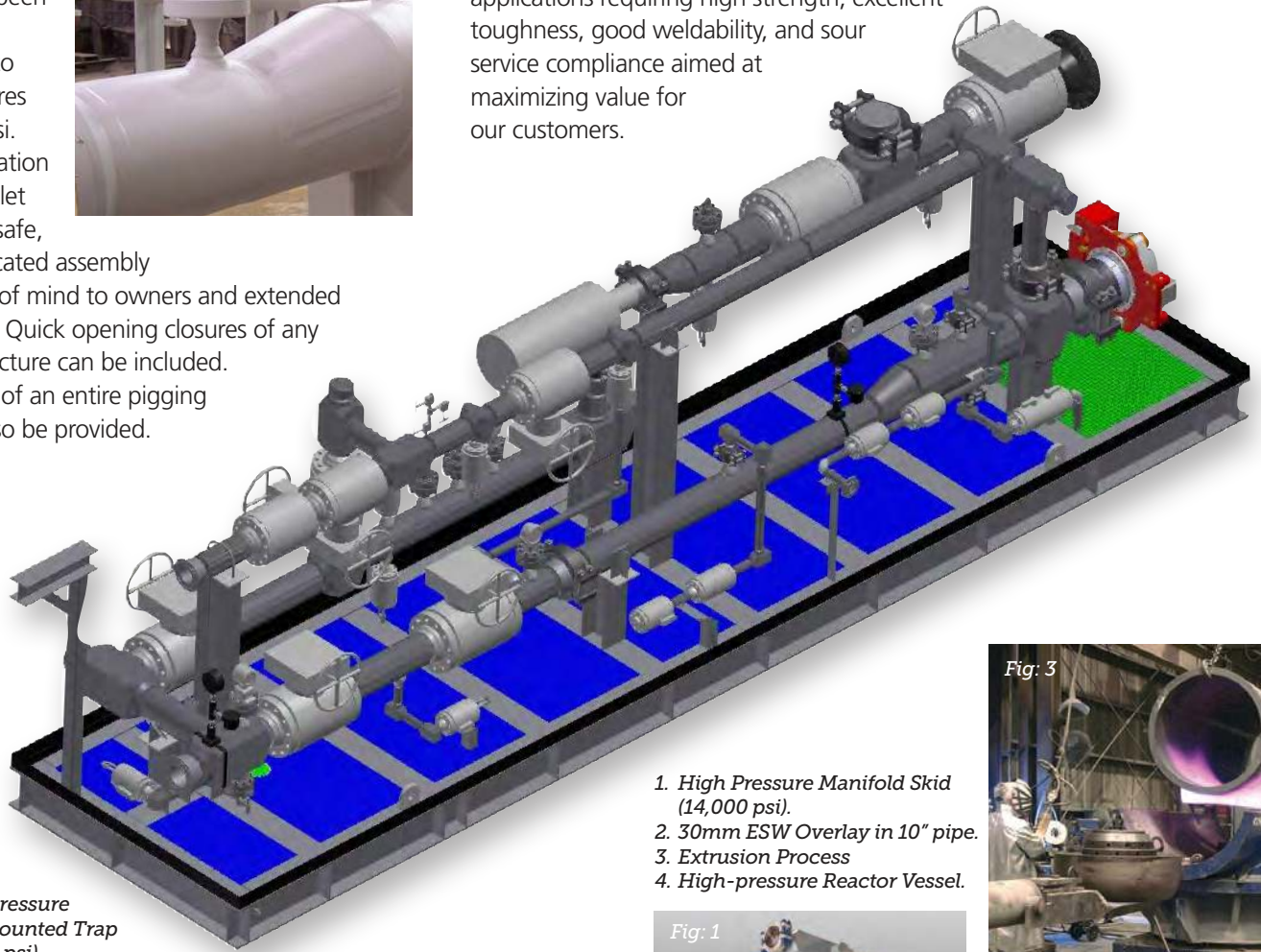




## Scraper Traps

Scraper traps, or pig launchers and receivers, have been fabricated from 6" line size up to 60" and pressures up to 15,000 psi.

With the application of extruded outlet connections, a safe, low stress fabricated assembly provides peace of mind to owners and extended operational life. Quick opening closures of any style or manufacture can be included. Modularization of an entire pigging package can also be provided.



*High-pressure  
Skid-Mounted Trap  
(15,000 psi)*

## High Strength Material Technology

Over the years Taylor Forge has been an innovator in the development of advanced grade forging materials for use in critical, high pressure applications requiring high strength, excellent toughness, good weldability, and sour service compliance aimed at maximizing value for our customers.

1. High Pressure Manifold Skid (14,000 psi).
2. 30mm ESW Overlay in 10" pipe.
3. Extrusion Process
4. High-pressure Reactor Vessel.



*Fig: 1*



*Fig: 3*



*Fig: 4*

## Gas Processing Equipment

We put the operators interests and needs first in our packaged gas processing units. The result is a highly efficient, easily maintained and operated package. Applications include dehydration, sweetening, fuel gas, vapor recovery, and membrane.

## Pressure Vessels

Taylor Forge has supplied pressure vessels into many different applications for over 70 years. With ASME U, U2, R, and S stamps, we have been an experienced and influential leader in all the energy and industrial markets.



*Fig: 2*

## Engineered Products Line

### Fabricated Assemblies

- Scraper traps, launchers/receivers (utilizing extruded outlets or fabricated from pipe and fittings)
- Pulsation bottles (extruded per DOT/B31.8 or ASME stamped)
- Slug catcher assemblies (modularized shipments or field assembled manifolds)
- Drip assemblies
- Valve settings

### Shell & Tube Heat Exchangers

- HTRI thermal ratings
- RCS mechanical design
- TEMA design and construction
- ASME Code U and S stamped
- 6" to 120" diameter shells

### Pressure Vessels

- ASME code U, U2, S and R stamped
- Vortex separators
- Vortex scrubbers
- Slug catchers
- Contactors and absorbers

### Extruded Outlet Headers

- Single and multiple outlet headers (run size 12" and larger, outlet size 2" and larger)
- Flow tees
- Meter header assemblies
- After-cooler manifold assemblies
- Pipeline and station piping components
- Extruded headers per MSS-SP-75

### Skidded Packages

- Launcher/Receiver skids
  - On-shore
  - Offshore
  - Manual or automated launching systems
- Valve and manifold skids
- High pressure meter skids

### Weld Fittings

- Caps (16" to 42")
- Reducers (concentric or eccentric, 16" and larger)
- High yield forged and machined fittings
  - Yield strength up to 80 ksi
  - Compliant with NACE MR0175/ISO 15156-2, Region 3, up to 70 ksi

### Miscellaneous Information

- ISO 9001:2008 certified
- Weld overlay (316L/625)
- Pipe and bottle hold-down clamps
- Pulsation bottle repair
- Partial material list:
  - Carbon steel
  - High strength low alloy
  - Stainless steel
  - Duplex and super duplex
  - 1-1/4 Cr, 2-1/4 Cr, 9 Cr
  - Nickel alloys



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