



**EPA's Natural Gas STAR and Methane Challenge Programs Technology Transfer Workshop:**

**Pipeline Blowdowns in Transmission and Distribution**



[www.tdwilliamson.com](http://www.tdwilliamson.com)

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Images: The Nature Conservancy 

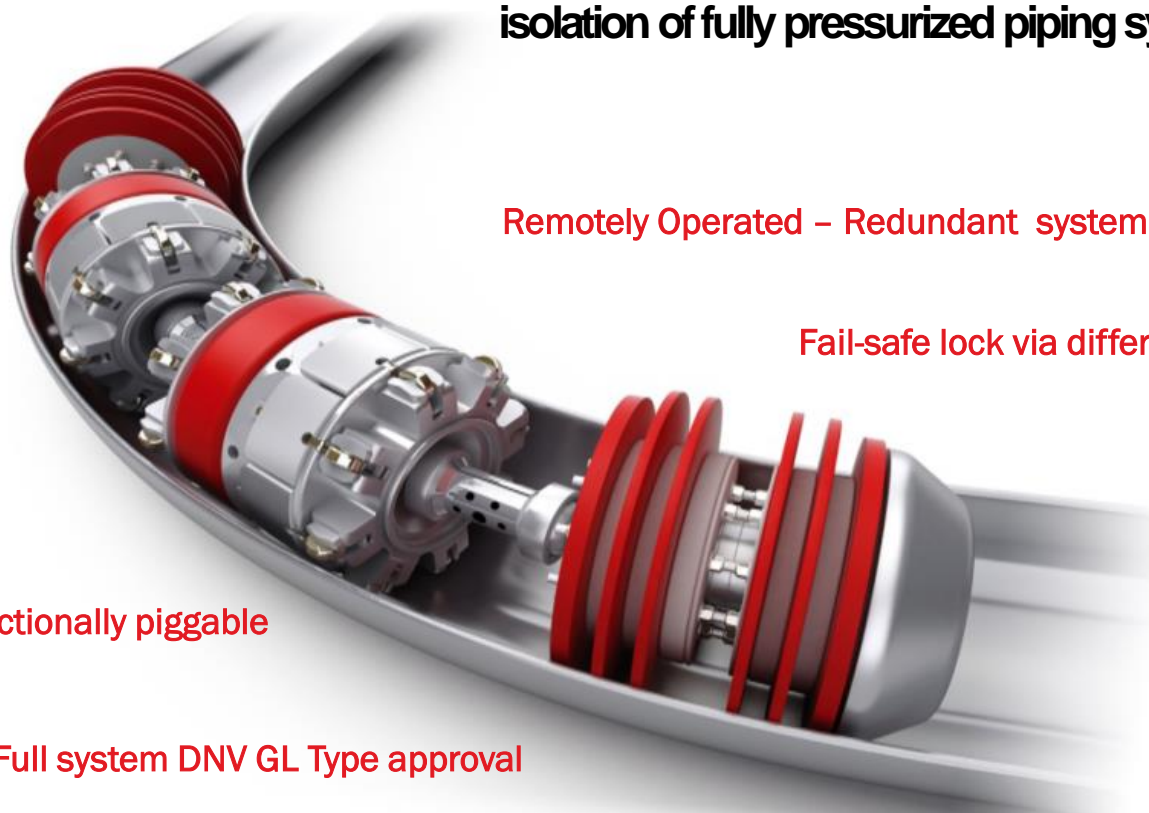
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# The SmartPlug® System

Field proven, completely non-invasive, Remotely operated, *piggable* plugging tool that provides, true double block isolation of fully pressurized piping systems.



Remotely Operated – Redundant system

Fail-safe lock via differential pressure

Modular Design – 3D bends

Bi-directionally piggable

Full system DNV GL Type approval

Double Block Isolation - Independent slips and seals

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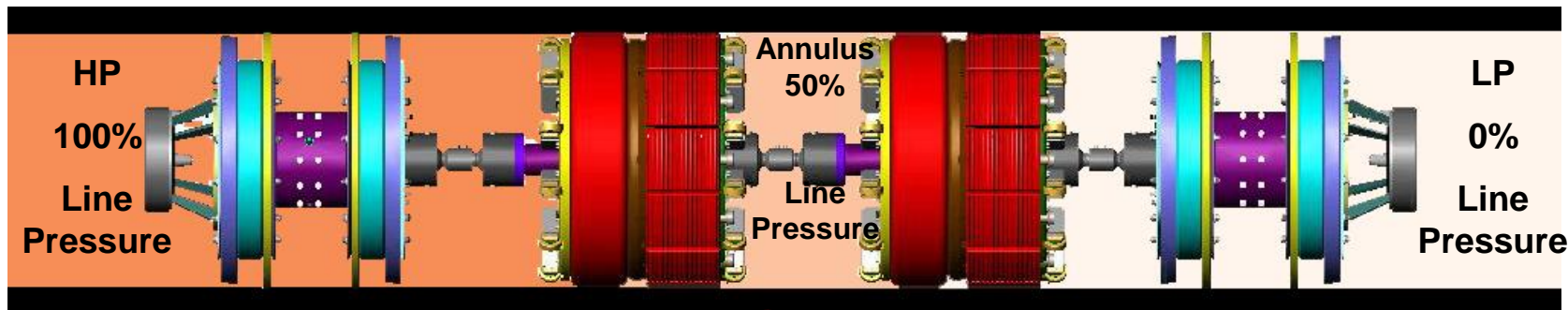
# SmartPlug® System Overview

## ***DNV-RP-F113/3 Criteria:***

- *Each Barrier can retain full pressure alone.*
- *Independent Locking System*
- *Independently tested*
- *Integrity can be monitored*
- *Independent from each other*

## **TDW SmartPlug® tool Design:**

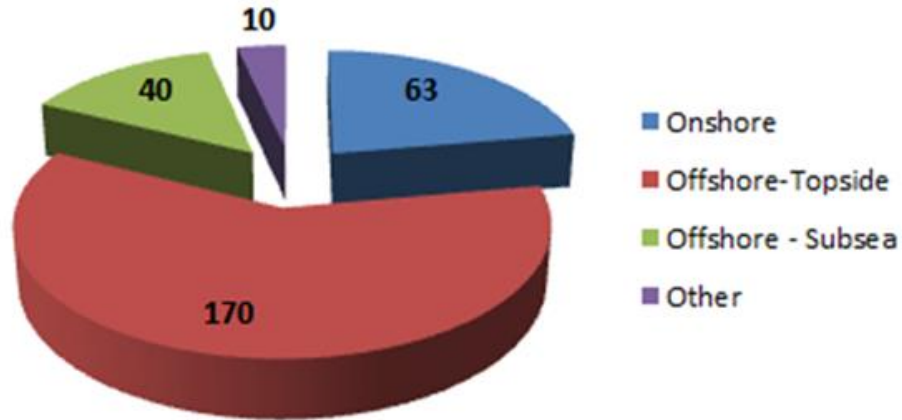
- Each Plug Module can maintain 100% of the line pressure alone
- Each Plug module is independently tested and has independent grips and seals
- Each Plug module is operated and set independently from the other module



- Failsafe via  $\Delta P$
- Failsafe Unset Feature
- Annulus pressure is monitored to ensure isolation integrity of both seals



## Total No. of Jobs



- Safely and successfully performed 280+ pipeline isolation jobs.
- Globally executed for various applications using SmartPlug tools of different configurations and sizes (8 to 48 inch).
- Pressures ranges from ambient to a maximum of 3,625psi (250 bar).
- Engineered applications significantly extended to 5,440 psi (375 bar).

*Since 2005, operators have “saved” an estimated 56.6 Billion standard cubic feet (Bscf) from being blown down using the SmartPlug® tool for isolating their gas/gas condensate pipelines*



# Case Study: Trap Station Replacement

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- 100% Double Block Isolation
- Hot-work carried out against SmartPlug® Tool
- Work completed without full line shutdown



# Case Study – 42” Valve Replacement

**Situation:** Leaking valve on pipeline in need of replacement in Gulf of Mexico

**Challenge:** Replace valve without shutting down production

**Solution:**

- Use **SmartPlug®** technology to isolate pipeline pressure on affected line while valve replaced
- Use **SmartTrack™** system to track & position **SmartPlug®** tool & monitor pipeline pressure

**Outcome:**

- Valve replaced while production maintained
- Reduced downtime = reduced costs
- Pressure maintained at 83 bar (1200 psi)
- Savings: USD \$15 million





# Pricing

- Pricing will be provided based on the project application (Quote Request Form)
- The target price will typically be within 15% above STOPPLE® Train with fitting & welding

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TDW OFFSHORE SERVICES AS  
Quotation Request Form for SmartPlug® Isolation Tool Services

### Quotation Request Form

Please fill out the following questionnaire. The specifications provided here will help TDW in issuing Technical and Commercial Quotes for the project. Please enter NOT APPLICABLE (or N/A) for fields

in which no data is entered.

1. Customer Information			
Company name	Southcoast Energy		
QRF completed by (name)	Ryan Rios		
Designation/Title	Project Engineer		
Tel./Mobile	210-252-2842	Date	9/9/16
Email	Ryan.Rios@southcoastenergy.com	Signature	Ryan Rios
Company Point of Contact	Brandon Hammond		
Designation/Title	Pipeline Manager		
Tel./Mobile	210-621-4140	Email	Brandon.hammond@southcoastenergy.com
2. TDW Information			
TDW Sales Rep. (name)	Tammy Wisenbaker		
Tel./Mobile	281.222.1107	Date	9/9/16
Email	Tammy.Wisenbaker@tdw.com	Signature	
3. General Information			
Reason for Isolation/Scope of Work (Please describe planned operation)	Project will require 2 isolation points on 2 pipelines within the same facility. The scope of work is to change out the first valve leaving a pig launcher and the separate portion will be utilizing an isolation pig to change out the first valve upstream of our pig receiver.		
Planned Isolation/Shutdown date (month/year)	ASAP		
Pipeline/Platform/Site Name	Hwy 97 Terminal		
Location (Onshore/Offshore)	Onshore		
Proposed isolation duration (days)	1 Day		



TDW OFFSHORE SERVICES AS  
Quotation Request Form for SmartPlug® Isolation Tool Services

Preferred site visit date	Whenever is most convenient. Give either me or Brandon a call and we will be out there.		
Availability of transport/shuttle to site/platform (Please specify frequency)	Road access.		
Availability of suitable work space (enclosed and temperature controlled) for personnel and computers	No indoor area. Location is all outside		
Base shipping address	Lancaster Plant: 9922 E. Hwy 83 Diley, TX 78017		
4. Personnel/Regulatory Requirements That Contractor Must Comply With (Tick as Appropriate)			
	YES	NO	
Visas/Entry Permits	X		
Comments:			
Certification	X		
Comments:			
Training	X		
Comments:			
Citizenship		X	
Comments:			
Miscellaneous (specify)			
5. Pipeline Information			
Year of construction	2012		
Pipeline length (in mi)	62 miles		
Nominal OD of pipeline (inches/mm)	24"		
	Value	Pipeline material and size (API, D11V, etc.)	Measurement location
Nominal ID of pipeline along pigging route (List all if more than one)	23.625		Source of data (specify whether pipe specs, drawings, UT measurement, etc.)
Nominal WT of pipeline along pigging route (List all if more than one)	.375		
Smallest bend along pigging route	Radius	45 degree elbow	ID 23



