Teledyne Oil & Gas
Innovation and Subsea Reliability
Teledyne Oil & Gas has been proudly serving the oil and gas industry for many years, providing leading edge interconnect, data/power transmission solutions, and asset integrity monitoring systems for high profile projects around the globe. Global field support teams, field-proven interconnect products, and a close partnership with Teledyne Scientific, a world-renowned research and development center, have positioned Teledyne Oil & Gas as a market leader in the energy industry.

As of 2016, Teledyne Oil & Gas now entails over twenty Teledyne Marine brands spanning a wide spectrum of capabilities and extensive experience serving all aspects of the oil & gas industry. From seismic solutions to seafloor surveys, vehicles to monitoring — the expanded Teledyne Oil & Gas team is ready to take on your toughest challenges — all from a single supplier.

Teledyne Technologies has an innovative heritage that dates back to the 1960s. From deep space, where Teledyne provides infrared imagers for space telescopes, hydrogen generators for space probes, and thermal tiles for the space shuttle, to the deep sea, where Teledyne provides navigation and imaging sonar, unmanned underwater vehicles, and high-power communications interconnect, Teledyne delivers results. Teledyne successfully serves the diverse needs of military, government, and commercial customers with highly reliable and high performance products and services for demanding and specialized environments.

Reliable and versatile unmanned underwater vehicles operating throughout the water column, suited for surveying, tracking, and inspection purposes. Gliders, Autonomous Unmanned Vehicles (AUVs), and inspection-class ROVs can be quickly configured to meet application-specific requirements.
Teledyne Oil & Gas

Capabilities

1. Acoustic Communication
2. Autonomous Underwater Gliders
3. Autonomous Unmanned Vehicles (AUVs)
4. Cable Terminations
5. Corrosion and Erosion Monitoring Packages
6. Environmental Monitoring Instrumentation
7. Harsh Environment Interconnect
8. High Pressure/High Temperature Wellhead Connections
9. Long Range LiDAR
10. Multibeam Echo sounders
11. Pipeline Tracking and Inspection
12. Profiling Floats
13. Remotely Operated Vehicles (ROVs)
14. Seismic Survey Solutions
15. Sub-Bottom Profilers
16. Subsea Data and Power Transmission
17. Subsea Distribution and Networking
18. Subsea Navigation and Positioning
19. Subsea Pumping and Boosting Connectivity
20. Surface Positioning and Navigation
21. 3D Multibeam Scanning Sonar

Applications

Subsea Connectivity and Networking

Offshore Platform Instrumentation and Interconnect

Seismic Survey Solutions
Advantages

- Best-in-class products, engineered solutions, and services
- One-stop shopping options for innovative technology solutions
- Global frame agreements where desired
- One P.O., set of terms, and warranty
- Continuous focus on HSE
- On-time performance and security of supply
- New product development and qualification programs
- Field-proven product/system reliability
- Continuous focus on HSE
- One P.O., set of terms, and warranty
- Field-proven product/system reliability
- Continuous focus on HSE

Innovation and Product Development

The combined resources of the Teledyne Oil & Gas lines leverage a broad range of technical expertise and continue to lead to advances in subsea technology. The core of these capabilities is Teledyne Scientific Corporation, a world class research laboratory with the technical depth to develop technologies designed for demanding offshore applications. Combined with our staged-gate new product development approach and rigorous reliability and qualification testing, these capabilities result in dependable operational performance validated through science.

Reliability & Engineering Science

Teledyne Oil & Gas uses a scientific approach to reliability engineering in the design and manufacture of complete technology solutions for the oil and gas industry.

Molecular Structure Analysis

- Analyzing molecular structure for understanding aging effects under harsh environmental stresses

Micro Structure Analysis

- Microstructure examination to optimize material processing

Metallurgy

- Rigorous reliability testing and examination of engineering plastics and elastomers

Materials

- Finite element analysis and CT imaging investigation to verify integrity

Components

- State-of-the-art accelerated life testing to validate 25+ year life

Products

- System reliability analyses by modeling and field reliability data

Reliability Block Diagram Analysis

- Working with customers in early design stages to reduce system complexity and increase reliability

Reliability Partnerships

- Reliability Partnerships

Customer Systems

- Customer Systems

In the Caspian Sea, BP’s pipeline assets are located 12 to 25 meters below the surface. Poor water clarity makes General Visual Inspection (GVI) pipeline inspections via ROV difficult, leading to delays and rising costs. Typical pipeline inspection involves a rigidly mounted sonar system and requires the survey vessel to maintain a specific bearing to keep the pipeline within the detection envelope. The water conditions, along with restricted vessel availability made it difficult to meet annual inspection targets. After investigating other options, the customer selected two RESON SeaBat 7125 Multibeam Echosounders, installed as a dual head configuration to gain ultra-high resolution. The SeaBat 7125 was furthermore operated in FlexMode, which generates a narrow sector with very high sounding density, exactly on top of the pipe. The multibeam sonar delivers a complete 3D isometric model of the surveyed area. In less than seven days, 740 kilometers of pipeline were fully surveyed. The frequency of pipeline inspections have now been increased to become an annual event, leading to a reduction in costly ROV inspections.
Teledyne Oil & Gas is a member of Teledyne Marine, a growing group of surface and subsea technology companies that delivers innovative products and solutions to the offshore, oceanographic, and defense markets.

Field Service

Teledyne Oil and Gas has a global support team of certified field technicians on call 24 hours a day, 7 days a week. These technicians are located around the world for fast deployment to on site locations.

Regional support centers in Daytona Beach, FL, Houston, TX, Aberdeen, UK, Johor Bahru, Malaysia, and Rio de Janeiro, Brazil are staffed with certified field technicians cross-trained to perform cable terminations, dry fit-ups, site integration testing (SIT), project consulting and installation support, equipment testing, and many other functions.