



TELEDYNE NUCLEAR

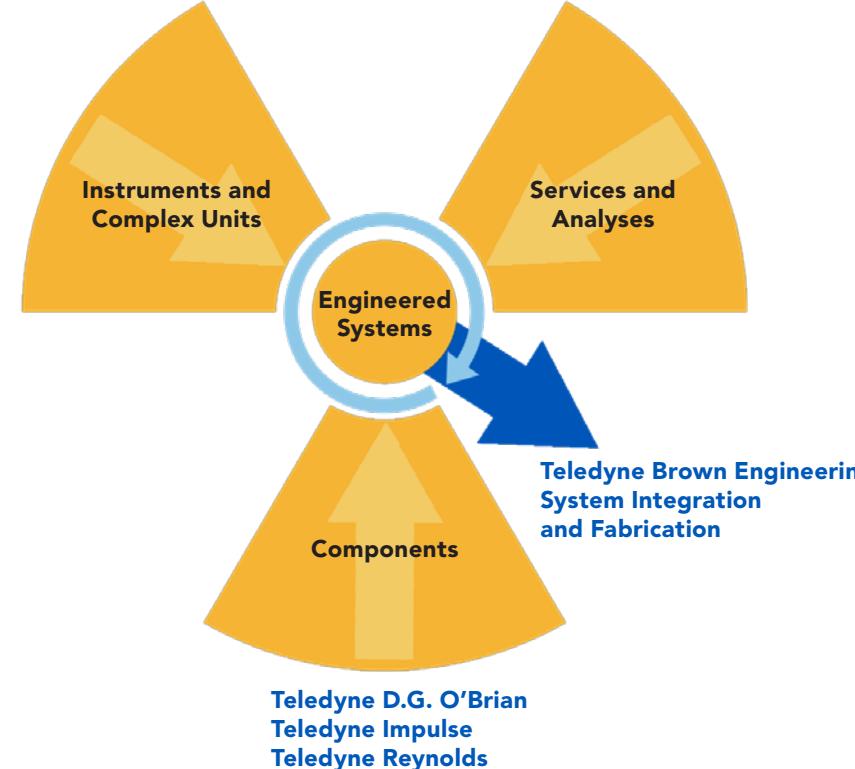
Teledyne Nuclear represents the collected capabilities of several Teledyne subsidiaries and business units jointly engaged to support the unique needs for the evolving nuclear and fusion markets. Each participating unit offers advanced nuclear technology and experience and is an innovator in its own area of expertise. Collectively, this group offers integrated solutions for nuclear products and services.

All eleven Teledyne Nuclear companies have decades of expertise in multiple nuclear markets, including commercial nuclear, Department of Energy (DOE), military, and NASA.

TEST, MEASURE, ANALYZE, CONNECT, MANUFACTURE, ENGINEER, MONITOR, INNOVATE

Teledyne RD Instruments
Teledyne Leeman Labs
Teledyne Analytical Instruments
Teledyne Energy Systems
Teledyne Hastings Instruments

Teledyne Test Services
Teledyne Brown Engineering
Radiological Labs
Teledyne Scientific Company



TELEDYNE NUCLEAR

Teledyne Nuclear offers a broad range of services and specialty engineered products and is fully integrated for the following nuclear industries:

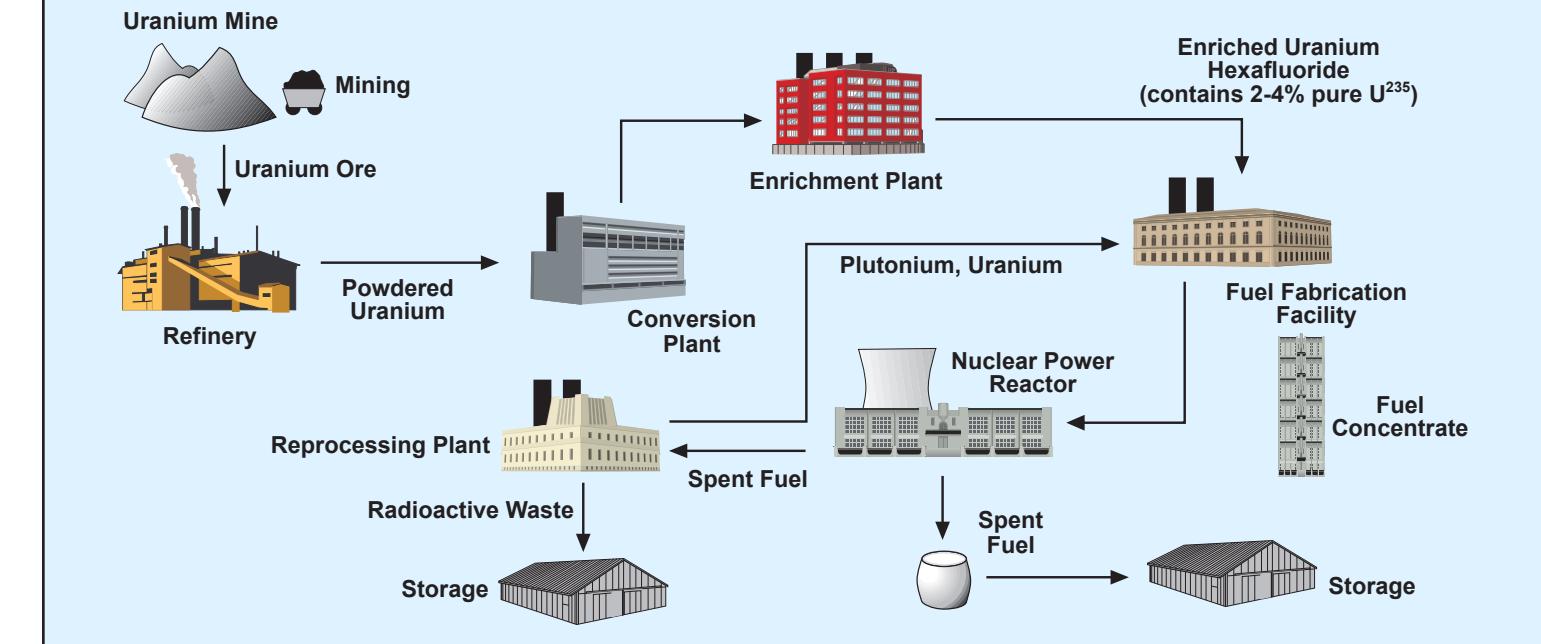
Nuclear Power Generation



Nuclear Marine Propulsion



Nuclear Fuel Cycle



MANUFACTURE AND ENGINEER



Company Headquarters:
Huntsville, AL

Facility:
750,000 sq. ft.

Number of Employees:
1,150

Years of Experience:
62

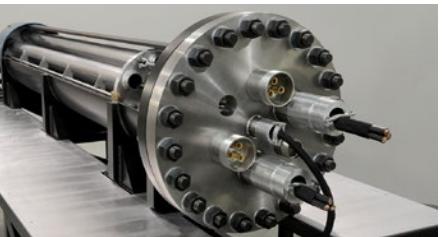
Quality Approval:
ISO-9001:2008 and AS-9100
Registered; NQA-1 and 10CFR50
Appendix B Compliant

TELEDYNE BROWN

Teledyne Brown Engineering (TBE) is a recognized leader in systems engineering, advanced technology application, software development, and manufacturing solutions to military, environmental, commercial, nuclear, and DOE requirements.

- Capabilities
 - Software development
 - Systems engineering
 - Manufacturing solutions
 - Advanced technology application
 - Manufacturing
 - Certificates of Authorization for ASME N, NPT, NS, and U Stamps
 - Prototypes and low-rate production projects
 - Machining, metal forming, welding, finishing, and mechanical/electronic assembly
 - Modeling and Simulation
 - Model Based Systems Engineering (MBSE)
 - Reliability engineering and analysis
- Applications Specific to Nuclear and Fusion Market
 - Engineering design and CAD support
 - Inspection, testing, and evaluation
 - Technical support services

TBE was a key player in both the centrifuge and laser uranium enrichment technologies. As a major manufacturing partner with USEC, TBE provided a variety of major components. As the M&O contractor to a confidential client for the laser enrichment program, TBE provided R&D services as well as manufacturing and testing of engineered-scale prototype machines.



TEST



Company Headquarters:
Marion, MA

Facility:
15,000 sq. ft.

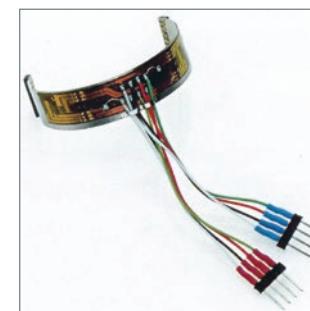
Number of Employees:
40

Years of Experience:
65

TELEDYNE TEST SERVICES

Teledyne Test Services (TTS) is a leading global provider of sensors, data acquisition, hardware, and software used to evaluate the operability of critical motor- and air-operated valves (MOVs and AOVs) in nuclear power plants. TTS maintains a highly trained staff of engineers and technicians who perform Nuclear Regulatory Commission-mandated testing as a service to our utility customers. TTS's innovative and patented approach to rapidly obtaining the requisite test data reduces outage duration and cost.

- Capabilities
 - National Institute of Standards and Technology traceable transducer class custom sensors
 - 10CFR50, Appendix B, Quality Assurance program



TELEDYNE RD INSTRUMENTS

MEASURE



Company Headquarters:
Poway, CA

Facility:
80,000 sq. ft.

Number of Employees:
200

Years of Experience:
25

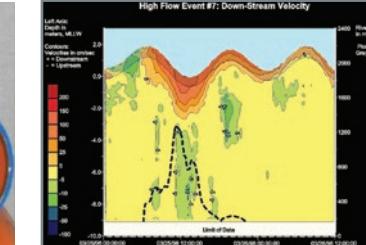
Quality Approval:
ISO-9001:2000

Teledyne RD Instruments specializes in the design and manufacture of underwater acoustic Doppler products for a wide array of water current-velocity and precision navigation applications.

The marine measurement and fresh-water resource management business groups within RD Instruments focus on supplying high-precision instruments, allowing measurement of the structure, distribution, and total flow of water currents.

These data are critical to the understanding of environmental characteristics such as physical transport of heat; biological material; pollutants and sediments; and the volume of water available for industrial, population, recreational, and environmental support.

- Capabilities
 - Doppler sonar-based water flow instrumentation
 - Manufacture underwater instrumentation with patented fabrication and signal processing technologies
 - Extensive



international representation/distribution network

- Instrumentation supplier to the energy, environmental services, research, and government sectors
- Applications Specific to Nuclear Market
 - ADCPs for engineering studies
 - Site surveys
 - Environmental impact studies
 - ADCPs for operational use
 - Model calibration
 - Intake monitoring
 - Outfall monitoring



TBE KNOXVILLE

ANALYZE



Company Headquarters:
Huntsville, AL

Facility:
25,000 sq. ft.

Number of Employees:
30

Years of Experience:
51

Quality Approval:
ISO 17025, NQA-1, 10CFR50
Appendix B

Teledyne Brown Engineering's Knoxville Environmental Laboratory has assisted nuclear power utilities, commercial industry, and government agencies nationwide in meeting their needs for radioanalytical services since 1965.

- Capabilities
 - Gamma spectroscopy
 - Low-energy photon spectroscopy
 - Liquid scintillation
 - Alpha spectroscopy
 - Proportional counting
- Applications Specific to Nuclear Market
 - General radiochemistry
 - Bioassay
 - Ground water monitoring
 - Environmental monitoring



- Sediment dating
- 10 CFR 50 effluent monitoring
- 10 CFR 61 waste characterization for disposal
- Certifications: NELAP, NUPIC, NIAC, and various state programs



TELEDYNE LEEMAN LABS

ANALYZE



Company Headquarters:
Hudson, NH

Facility:
25,000 sq. ft.

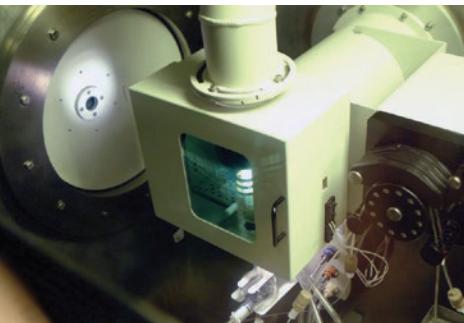
Number of Employees:
61

Years of Experience:
34

Teledyne Leeman Labs is a leading supplier of elemental analysis products and services such as Inductively Coupled Plasma Optical Emission Spectrometers (ICP-OES) and Mercury Analyzers for the nuclear industry. We have been servicing the needs of our national laboratories, nuclear fuel manufacturing facilities, and nuclear power industry. All of our products are manufactured in the United States and serviced by our field personnel who are accustomed to working with the unique requirements of the nuclear industry.

At Teledyne Leeman Labs, we offer a wide variety of containment options for our family of ICP-OES products. Whether you require an ICP interfaced to a plutonium standard glovebox or a HEPA-filtered laminar flow hood, Leeman Labs has the products, knowledge, and experience needed to provide you with a truly exceptional solution.

- Capabilities
 - ICP-OES Instruments
 - Simultaneous Solid-State Detector Systems
 - Simultaneous and Sequential PMT Systems



- Mercury Analyzer
 - Liquid Sample Systems
 - Solid Sample Systems
- Applications Specific to Nuclear Market
 - Enclosure/containment options
 - Plutonium standard glovebox
 - Chemical fumehoods
 - Clean microenvironments or contamination control

CONNECT



Company Headquarters:
Portsmouth, NH

Facility:
65,000 sq. ft.

Number of Employees:
250

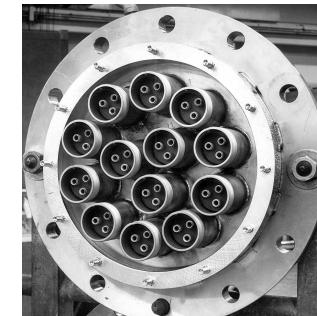
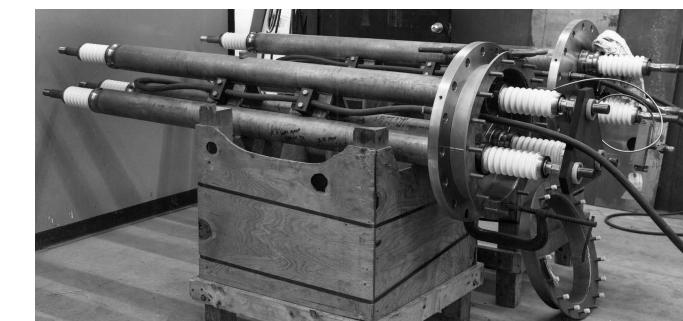
Years of Experience:
54

Quality Approval:
ISO-90001-2000

TELEDYNE D.G. O'BRIEN

Teledyne D.G. O'Brien designs and manufactures Electrical Penetration Assemblies (EPAs) for nuclear power plants. Since 1962, D.G. O'Brien has incorporated the unmatched reliability of glass-to-metal seals into pressure barriers within the optical and electrical connectors, penetrators, and cable assemblies we deliver to our customers. These barriers enable Teledyne D.G. O'Brien products to provide fail-safe hermetic reliability over the long term in extreme environments. As the demands and specifications of the marketplace become more challenging, Teledyne D.G. O'Brien remains committed to developing and manufacturing effective, fail-safe, and innovative solutions to meet our customers' needs.

We serve the nuclear power, defense, oil and gas, biomedical, and aerospace markets. Teledyne D.G.



O'Brien has the experience, expertise, facilities, and processes to deliver any product to meet your specifications.

- Capabilities
 - Glass-to-metal sealing
 - Penetrator and connector design
 - Fiber-optic terminations
 - Cable assemblies
 - Molding – thermoplastics
 - Field Installable and Testable Assemblies
- Applications Specific to Nuclear Market
 - EPAs for commercial nuclear power plants
 - Submarine hull penetrators and outboard cable assemblies
 - Subsea oil and gas wellhead feedthrough systems
 - Connection system for world's first fully implantable, human heart replacement system

CONNECT



Company Headquarters:
San Diego, CA

Facility:
43,000 sq. ft.

Number of Employees:
93

Years of Experience:
37

TELEDYNE IMPULSE

Teledyne Impulse designs and manufactures electrical and optical interconnection systems for a wide range of harsh environments. Our dry-mate and wet pluggable connectors are proven performers in monitoring and inspection systems for the nuclear industry. From the smallest, high-pressure underwater connector to large, extremely rugged vehicle systems, Teledyne Impulse has created many innovative connection solutions.

- Capabilities
 - Neoprene, polyurethane, and glass-reinforced epoxy molding
 - Elastomer to metal bonding
 - Off-the-shelf or custom engineered
 - Efficient and flexible manufacturing
- Applications Specific to Nuclear Market
 - Connectors and cable assemblies used on:
 - Lights
 - Cameras
 - Robotic vehicles
 - Corrosion monitoring equipment



CONNECT



Company Headquarters:
Los Angeles, CA

Facility:
100,000 sq. ft.

Number of Employees:
625

Years of Experience:
67

Quality Approvals:
ISO-9001-2000/AS 9100B

TELEDYNE REYNOLDS

Teledyne Reynolds designs and manufactures high-reliability cable assemblies, ceramic-to-metal connectors, and feedthrough connectors that incorporate radiation-resistant and long service life materials. With more than 55 years of experience in supplying components to our nation's Nuclear Weapons Complex and more than 15 years in the commercial nuclear industry, Teledyne Reynolds excels at using its extensive design experience and materials knowledge to provide customers with solutions to their toughest interconnection problems.

- Capabilities
 - Manufacturing and testing
 - Engineering design and problem solving
 - Lean manufacturing facility
 - Worldwide operations
- Applications Specific to Nuclear Market
 - Instrumentation and Control Cables
 - Ceramic Terminal Glands
 - Rod Position Indicator Control Cables
 - Rod Position Indicator Shutdown Cables
 - Control Rod Drive Mechanism Cables



MANUFACTURE



Company Headquarters:
Hunt Valley, MD

Facility:
68,000 sq. ft.

Number of Employees:
140

Years of Experience:
45

Quality Approval:
ISO-9001:2000

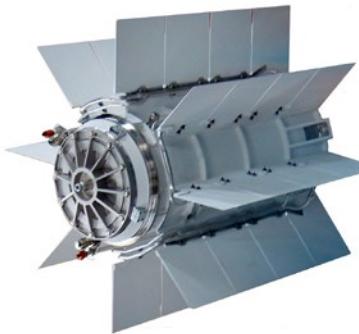
TELEDYNE ENERGY SYSTEMS,

Teledyne Energy Systems, Inc. (TESI) draws from more than 40 years of experience in the design and manufacture of hydrogen/oxygen generators and nuclear power systems. TESI is a global leader in the supply of this equipment for both commercial and government uses. Our products excel in industrial, defense, renewable energy, and space applications.

TESI is currently the only U.S. supplier of radioisotope thermal electric generators used by NASA for powering spacecraft deep into the solar system. Teledyne radioisotope generators have flown on Pioneer 10 and 11 and Viking 1 and 2 Landers and was flown on the Mars Science Lab in 2011.

TESI has an ongoing relationship with U.S. facilities that handle nuclear materials. The transport, handling, and safety aspects are understood. Safety analysis and thermal/structural analyses are performed on a recurring basis.

- Capabilities
 - H₂/O₂ generators and facilities, delivered globally



- ASME-certified (U and UM stamps) manufacturing capabilities
- Magnesium bed vessel production
- Engineering and fabrication of small, specialty systems
- Applications Specific to Nuclear Market
 - On-site hydrogen production for cooling, water treatment, and O₂ control
 - Corrosion suppression
 - Nuclear safety/accident analysis

MANUFACTURE



Company Headquarters:
Hampton, VA

Facility:
40,000 sq. ft.

Number of Employees:
73

Years of Experience:
72

Quality Approval:
ISO-9001-2000

TELEDYNE HASTINGS

Teledyne Hastings Instruments (THI) is a trusted manufacturer of a wide range of quality Vacuum Instruments and Gas Mass Flow Instruments. THI's vacuum products cover a wide range of vacuum pressure measurement and control, from atmosphere to ultra-high vacuum. The mass flow line of meters and controllers covers a broad range of gases, from 5 sccm to 15,000 slm (N₂ equivalent), that includes a variety of flexible options for outputs, calibration, and fittings.

- Capabilities
 - Design and manufacture commercial, industrial, and custom analog and digital instrumentation/sensor technology solutions:
 - Thermocouple
 - Pirani
 - Piezo
 - Ionization (cold cathode)
- Applications Specific to Nuclear Market
 - Ultra-low Differential Pressure Mass Flow Meters for centrifuge processes
 - Precision Mass Flow Controllers for ambient air-monitoring systems
 - Negative pressure monitoring for waste storage



TELEDYNE SCIENTIFIC

INNOVATE



Company Headquarters:
Thousands Oaks, CA

Facility:
265,510 sq. ft.

Number of Employees:
350

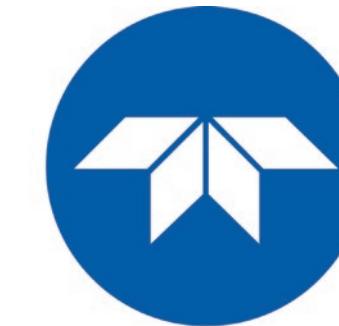
Years of Experience:
54

Teledyne Scientific Company (TSC) is a recognized center of R&D excellence in materials, electronics, optics, and information sciences. The company builds upon a continuous 54-year history of major research programs funded by government agencies, including NASA, DoD, DOE, and select commercial customers. TSC has developed leadership positions in several relevant areas in the nuclear industry, including materials for nuclear waste storage and corrosion analysis for nuclear facilities. In partnership with other Teledyne business units, TSC's goal is to advance the nuclear industry through the development and transitioning of state-of-the-art technologies into engineered products.

- Capabilities
 - Composite materials for extreme environments
 - Ceramic materials design and processing
 - Comprehensive materials analysis and testing
 - Advanced sensor technologies
 - High-speed electronic devices
 - High-speed liquid crystal and photonic devices
 - Microelectromechanical Systems (MEMS)
 - Autonomous systems
 - Image processing and data ex-



- traction
- Network security and anti-tamper
- Applications Specific to Nuclear Market
 - Tailored ceramics for long-term nuclear waste storage
 - Corrosion detection and mitigation for reactor components
 - Composite ceramic tubes for heat exchangers
 - Sensors, actuators, and electronics for extreme environments
 - Power conversion and active cooling
 - Cyber-security and authentication technologies
 - Visualization, maintenance, and training technologies
 - Development of novel "out-of-the-box" technology concepts



Everywhereyoulook™

For more information, contact our Business Development staff at:

Teledyne Brown Engineering, Inc. (Headquarters)

Huntsville, AL
Phone: 256.726.1385
E-Mail: TBEBusiness@teledyne.com

Teledyne Brown Engineering, Inc. Radiological Lab Facilities

Knoxville, TN
Phone: 865.934.0373
E-Mail: keith.jeter@teledyne.com

Teledyne D.G.O'Brien (Headquarters)

Seabrook, NH
Phone: 603.474.5571
E-Mail: dgo@teledyne.com

Teledyne Energy Systems, Inc. (Headquarters)

Hunt Valley, MD
Phone: 410.771.8600
E-Mail: Energy.Systems@teledynees.com

Teledyne Hastings Instruments (Headquarters)

Hampton, VA
Phone: 757.723.6531
E-Mail: hastings_instruments@teledyne.com

Teledyne Impulse/Interconnect (Headquarters)

San Diego, CA
Phone: 858.842.3100, 800.327.0971
E-Mail: impulse@teledyne.com

Teledyne Instruments Test Services (Headquarters)

Marion, MA
Phone: 508.748.0103
E-Mail: sales_testservices@teledyne.com

Teledyne Leeman Labs (Headquarters)

Hudson, NH
Phone: 603.886.8400
E-Mail: LeemanLabsinfo@teledyne.com

Teledyne RD Instruments (Headquarters)

Poway, CA
Phone: 858.842.2600
E-Mail: rdisales@teledyne.com

Teledyne Reynolds, Inc. (Headquarters)

Los Angeles, CA
Phone: 310.823.5491
E-Mail: reynoldsinc@teledyne.com

Teledyne Scientific Company, LLC (Headquarters)

Thousand Oaks, CA
Phone: 805.373.4545
E-Mail: tsc_nuclear@teledyne-si.com



www.teledynenuclear.com