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## Company Profile

### **- About Thielsch Engineering, Inc.**

Thielsch Engineering, Inc. (Thielsch), founded by Helmut Thielsch in 1984, is a rapidly growing employee-owned engineering and technical services company with over 400 employees and annual revenues in excess of \$90 million. The corporate headquarters are located in Cranston, Rhode Island, with branch offices in Massachusetts, New York, Ohio, Texas and Florida.

Thielsch provides a range of coordinated services on regional, national and international levels. Our mission is to deliver value-added, integrated services to our customers. We are dedicated to reducing operating costs and increasing profitability by extending the operating life of capital equipment, improving reliability and safety, and conserving energy.

*Read more at <http://www.thielsch.com/about>*



## - Operating Groups

**Professional Engineering:** Failure analysis, engineering evaluation, expert testimony and insurance claims analysis for litigation preparation.

**Field Engineering:** Condition assessment, engineering analysis, industrial fabrication and welding services, ASME R stamp program and mechanical integrity program.

**Process & Design Engineering:** Client representation in major projects, energy conservation, feasibility studies, used equipment and physical plant assessments/due diligence.

**Energy Efficiency Engineering:** RISE Engineering services include conservation studies and implementation performance improvement for mechanical processes, lighting, electrical and HVAC.

**Water Management Services:** Testing, repair, installation and replacement of water meters.

**Mechanical-Electrical-Plumbing-Fire Protection Design Services:** Innovative and sustainable designs, optimization of construction and operating costs.

**Welders Training:** American Weld Society (AWS) and American Bureau of Shipping (ABS) accredited test facility. Approved provider of welder training for the Department of Labor and Training.

*Read more at <http://www.thielsch.com/>*



## - Laboratories

**Metallurgical & Materials:** An A2LA-certified metallurgical evaluation laboratory specializing in failure and root cause analysis and heat and surface treatments.

**Environmental:** ESS Laboratory is a full-service NELAP- and DOD-accredited environmental laboratory specializing in analytical testing for environmental management.

**Microbiological:** BAL Laboratory is a state-certified laboratory providing testing services in the areas of environmental and public health microbiology.

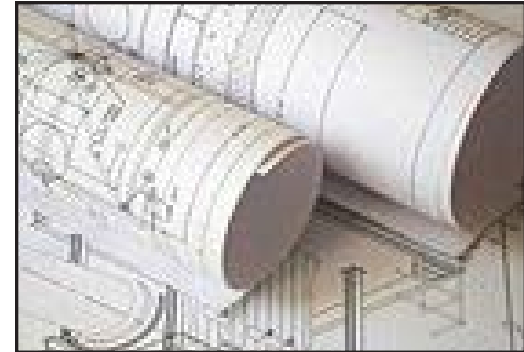
**Nondestructive Examination:** Providing ASNT Level III radiography, ultrasonic, magnetic particle, liquid penetrant, eddy current, corescope and video-probe testing and inspections.

**Geotechnical:** An AASHTO-accredited laboratory specializing in direct shear, triaxial and unconfined compression, consolidations, petrographic analyses, rock testing and geomembrane testing.

**Construction Testing Services:** Field and laboratory soil, concrete, masonry, asphalt and steel testing. Structural steel, roof, anchor bolt and fireproofing inspections. Special Inspections services.

*Read more at <http://www.thielsch.com/>*



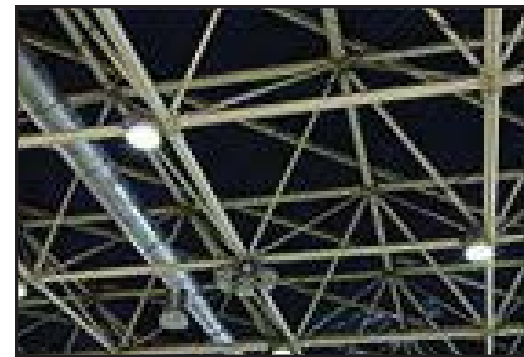


## Engineering Services

### - Design Engineering

Thielsch Engineering offers a wide range of design services to meet the needs of our customers. Our capabilities include the design of mechanical, electrical, plumbing, and fire protection (MEP/FP) systems for all types of facilities, including manufacturers, hospitals, municipalities, housing authorities, hotels, educational facilities, libraries, churches, and various industrial buildings and offices. Our process design services cover both the initial construction and the expansion of plant utilities, and we provide the design, specifications, and oversight of any construction for plant optimization, effectively reducing a facility's operating and maintenance costs. In addition, our experienced engineers are experts in the selection of materials which meet applicable codes and are best suited to the design.

*Read more at <http://www.thielsch.com/design-engineering>*



## · Integrated Engineering

Thielsch Engineering employs an integrated engineering approach to virtually any type of project, from maintaining a plant's mechanical integrity, to optimizing the safety and efficiency of a facility, to addressing an unexpected emergency situation. Our experienced staff of qualified engineers and technicians offers a broad range of coordinated mechanical, chemical, electrical and civil engineering services that provide cost-effective solutions to our customers' needs.

*Read more at <http://www.thielsch.com/integrated-engineering>*



## - Specialty Engineering

Specialty engineering is the foundation of our engineering services. Thielsch Engineering has over fifty multi-disciplined engineers who have been performing various aspects of failure analysis and forensic engineering for most of their professional careers. Whether it is a boiler, deaerator, pipeline, bridge, fastener, or an entire power plant, Thielsch engineers have performed a failure analysis of it! Once the root cause of a failure is determined, our work often continues either by providing expert witness testimony or by offering our expertise in the insurance phase of the project. To help prevent these incidents from occurring in the first place, we are ready to act as “owner’s representative” in order to ensure that our clients receive the highest quality service from their vendors.

*Read more at <http://www.thielsch.com/specialty-engineering>*





## Field Engineering

### · 4-SYTE

Thielsch Engineering has developed the 4-SYTE System Strategy program as a highly effective tool for comprehensive boiler management. The 4-SYTE System Strategy is an online, 3-dimensional, interactive data management program that allows plant managers and corporate planners to access their account via a secure website and manage all previous inspections, repairs, and recommendations as well as construction, design, and operational data associated with any section of the critical boiler components in their facilities. Using this program, our engineers apply their expertise in root cause analysis and failure prevention to develop a strategy for improved reliability and risk management.

*Read more at <http://www.thielsch.com/field-engineering/4-syte>*



## **- Plant Maintenance and Construction**

The Capital Projects Management (CPM) group within Thielsch Engineering focuses on completing a successful project with due consideration for the most critical components: a detailed project scope and schedule, critical success factors, assessment of risks, and value engineering. CPM personnel have managed hundreds of projects, domestically and internationally, in sizes ranging from \$100m to over \$60mm. Recently, the group has exceeded client expectations in a variety of projects including reactor replacements for a specialty chemicals manufacturer, a multi-tank aviation fuel tank farm, a wastewater treatment plant upgrade, installation of a steam-driven power generating turbine, and the rebuilding of a failed million gallon storage tank for a pulp and paper producer.

*Read more at <http://www.thielsch.com/field-engineering/general-field-engineering>*



## - Condition Assessment

A successful, cost-effective condition assessment of piping systems and industrial equipment requires engineering, project management, and technical professionals with the expertise to accurately assess existing conditions, identify areas most susceptible to failure, and provide valuable recommendations for maintenance or repair. Thielsch Engineering personnel have inspected over 10,000 piping systems, pressure vessels, compressors, and other equipment in various types of industrial plants, including refineries, power plants, and chemical plants. Our experts have first-hand knowledge of plant engineering, from project management to construction to startup, and possess a thorough understanding of support systems, stress analyses, finite element analyses, and mechanical and structural engineering.

*Read more at <http://www.thielsch.com/field-engineering/condition-assessment>*



## - Outage Support

Outages are generally scheduled by operating plants in order to address routine maintenance and identify and eliminate potentially dangerous or costly failures that can interrupt plant operations. Thielsch Engineering offers a complete range of services associated with outage support by providing inspections, condition assessments, testing services, and repairs that ensure the reliability of equipment for continued service. Our highly resourceful and experienced engineers are familiar with the numerous forms of failure mechanisms that occur in industrial piping, pressure vessels, boiler components, and plant equipment and are able to establish programs for monitoring and long-range planning to preserve the safe and efficient operation of the equipment during operating periods.

*Read more at <http://www.thielsch.com/field-engineering/outage-support>*



## - Welding Services and Industrial Fabrication

Thielsch Engineering provides high-quality, cost-effective welding services for power generating, chemical, pharmaceutical, and water treatment facilities. Our staff of qualified welding engineers and technical personnel performs both field installation and repair as well as shop fabrications that meet all code requirements. With the capabilities to develop and implement specialty weld repairs, we specialize in difficult, unique conditions and unusual weld applications.

*Read more at <http://www.thielsch.com/field-engineering/specialty-welding>*



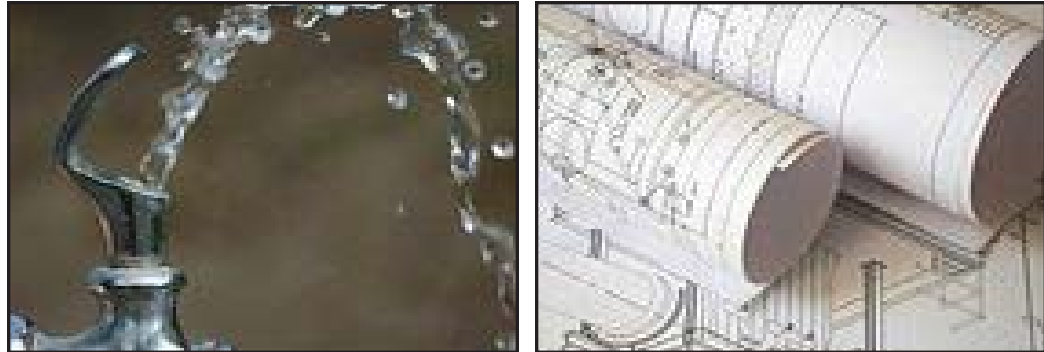


## Laboratory Testing

### · Environmental Testing

ESS Laboratory, a division of Thielsch Engineering, is a full service analytical laboratory dedicated to providing comprehensive analytical testing services for the identification and assessment of environmental contaminants. Our services are used to meet various regulatory permitting and reporting requirements, determine compliance with both State and Federal environmental regulations, and assess potential present or future environmental liabilities. Compliance with these regulations can become a costly and complicated process. It is the philosophy of ESS Laboratory to make the purchase of these services as cost effective as possible for our customers.

*Read more at <http://www.thielsch.com/laboratory-testing/environmental-testing>*

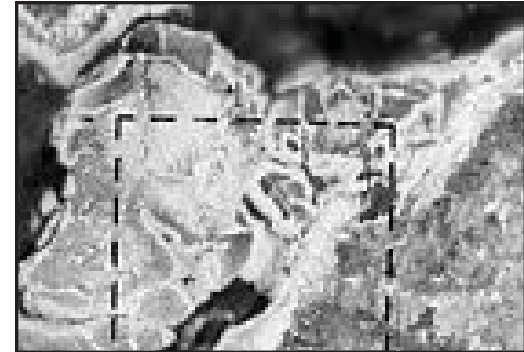


## · Microbiological Testing

BAL Laboratory, the Microbiology division of Thielsch Engineering, Inc., has been providing testing services related to environmental and public health microbiology for over 16 years. These services include both conventional and unique/custom approaches for monitoring and assessing microbial contamination problems.

We perform analyses for potable and non-potable water including, but not limited to, Total Coliform, Fecal Coliform, E. Coli, and Enterococcus by MPN, MF and P/A methods. With a number of growth mediums at our disposal (mEI, mTEC, mEndo, mFC, LTB, BGB, EC, ECMUG, NA-MUG, Colisure, Colilert, mCP), we can tailor an analysis to meet a client's requirements as well as the requirements of the sample.

*Read more at <http://www.thielsch.com/laboratory-testing/micorbiological-testing>*



## · Metallurgical and Mechanical Testing

Thielsch Engineering operates a full-service independent metallurgical and mechanical testing laboratory that is A2LA certified and capable of performing all tests in accordance with ASTM, ANSI, MIL-Spec, and ISO specifications.

Thielsch metallographers are highly trained technicians with extensive experience in sample preparation and categorization of materials. The laboratory's capabilities include photography, sample mounting and preparation, metallography at magnifications up to 2000X, hardness and thickness measurements, and metallurgical evaluations.

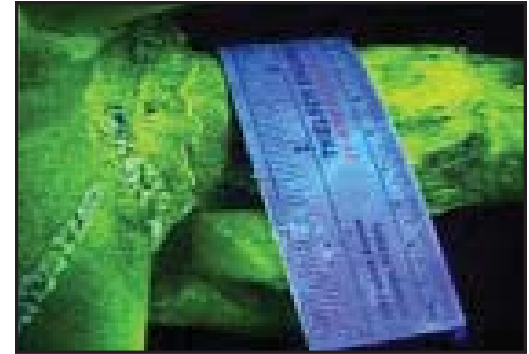
*Read more at <http://www.thielsch.com/laboratory-testing/metallurgical-mechanical-testing>*



## - Construction Testing and Geotechnical Materials

CTS provides on-site field inspections and in-house geotechnical and construction materials laboratory testing services to ensure that the proper selection, quality and workmanship of the construction materials being used and the services being provided comply with the project specifications. Thielsch makes the effort to understand our clients' needs, with the intent to provide a sensible scope of testing. Our laboratories are accredited by AASHTO and the Army Corps of Engineers and our field staff is certified by ACI, NICET, NETTCP, ICC, AWS, FACE, OSHA, PMP and NHI.

*Read more at <http://www.thielsch.com/laboratory-testing/construction-testing-and-geotechnical-materials>*



## - Nondestructive Testing

For over 25 years, Thielsch Engineering has been performing nondestructive testing (NDT) throughout New England as well as in the other regions of the United States, both in discrete projects and in conjunction with our engineering evaluations and condition assessments. Our NDT inspections are performed in the field utilizing our field laboratories or at our corporate facility.

Our inspectors are certified as ASNT Level II or Level III examiners and are cross-trained in various NDT inspection techniques. In addition, we also have numerous American Weld Association Certified Weld Inspectors (CWI) and steel inspectors.

*Read more at <http://www.thielsch.com/laboratory-testing/nondestructive-testing>*





**R I S E**

## Energy Services

### **- Demand Side Management**

As one of the first one-stop energy solution providers in the United States, RISE Engineering has become synonymous with leading-edge resource conservation services for energy end users in all building sectors. The division has achieved a national reputation for its operation of innovative demand-side management, load building, and customer retention programs on behalf of gas, electric, and water utilities.

*Visit our web site [www.riseengineering.com](http://www.riseengineering.com) for additional information on our energy management services.*

*Read more at <http://www.thielsch.com/energy-services/demand-side-management>*



## **- Water Management Systems**

Water Management Systems (WMS) is a leader in the testing, repair, and recalibration of water meters as well as the installation of commercial and residential meters. WMS services the entire United States, providing utilities and commercial property owners reliable data in a completely digital format.

As the demands placed upon utilities and municipalities increase, more and more customers are looking to WMS to provide turnkey solutions for their metering needs. The service organization of WMS specializes in water resource management, offering the experience and expertise that utilities and municipalities need for system evaluation, performance analysis, revenue analysis, testing, repair and meter replacement.

*Read more at <http://www.thielsch.com/energy-services/water-management-systems>*



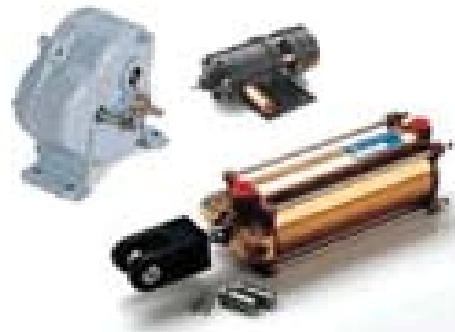
**Powergy**

## - Power Conditioning Products

The escalating demand for electricity has inadvertently imposed a further strain on the already stressed power grid, and the quality of power is no longer a given. Power outages, brownouts, electrical surges, and spikes have become too common, exposing your valuable equipment to unnecessary damage, repair and replacement.

Powergy Clean Power Systems prevent damaging surges and spikes from shortening the life of motors, transformers and sensitive equipment. The patented design reduces KVA, demand charges, and power factor penalties. (UL508 application rated. NEMA 12 enclosure.)

*Read more at <http://www.thielsch.com/energy-services/power-conditioning-systems>*



## **- Water Distribution Products**

For 25 years, ALCO Engineering, a division of Thielsch Engineering, has been providing services in the water and wastewater industries. These services include supplying equipment/parts and technical support for controls and instruments.

On January 1, 1995, ALCO acquired the worldwide BIF® replacement parts and support service business. As of that date, ALCO Engineering became the exclusive, authorized manufacturer and distributor of BIF parts and services.

*Read more at <http://www.thielsch.com/energy-services/water-distribution-products>*

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