www.candent-technologies.com

Mission

Design, develop, and build the most efficient, cost effective, environmentally friendly, small to medium size, propulsion and power systems utilizing state of the art turbomachinery, electrical power generation technology, and highly effective energy recovery systems.

Supporting Principles

Candent Technologies will always strive to develop the simplest engineering solutions, in order to enhance component efficiencies, longevity, and reliability, as well as to maximize system performance and to minimize system life cycle cost.

Company Values

Candent Technologies believes that thorough understanding of the problem enables the creative processes that produce simplicity in design solutions, and hence encourages our team members to use their collective, extensive, and highly diversified experience, along with open minds, to carefully examine the challenges and to produce world class leading solutions.

Value Proposition

Candent Technologies provides optimum advanced propulsion and power technology solutions that enable the customer to meet and surpass their own requirements for Size, Weight, and Power (SWaP), as well as energy efficiency and cost effectiveness.

Core Competencies

The Company is staffed by a lean, seasoned, and expert team of technical, program management, logistics support, and business development personnel, where each member has 20 or more years' experience in the design, development, qualification/ certification, management, production and support of all types of gas turbines, but particularly small and low cost turbine engine systems. In addition, other capabilities include installation design and full system integration, as well as design and build of small, heavy fuel reciprocating engines for propulsion and power.

Turbine Engine Performance and Thermodynamic Cycle Analysis
Candent Technologies uses state of the art engine cycle analysis tools, including the NASA Engine Performance Program, to define engine performance at all potential conditions throughout the operational envelope.

Component Preliminary Design Synthesis
Candent Technologies utilizes the complete NASA developed suite of preliminary design synthesis tools for sizing and initial design of rotating and static engine aerodynamic components.

Component Design
The company employs state of the art UGS CAD design products. All design is done in three dimensional models and many parts are machined or created from castings or additive manufacturing directly produced from our solid models.

Structural Analysis
Along with a number of NASA developed tools for analysis of rotating system dynamics and gear design, structural analysis is performed using the Finite Element Modeling And Postprocessing (FEMAP) structural and dynamic analysis program.

Computational Fluid Dynamics
In addition to NASA developed tools for airfoil to airfoil analysis, Candent uses a variety of state of the art CFD tools to perform specific flow analysis tasks such as duct flows and pressure loss determination.

Heat Transfer and Secondary Flow
Extensive experience in heat transfer and the latest tools of the trade enable the complete design and optimization of secondary flow systems.

Design Expertise
Our analysis and design experts, guided by over 25 years of individual design and engine design experience, give Candent Technologies the capability to move quickly through the design process and "get it right the first time."

System Integration
The Candent Technologies team uses a systems engineering approach to identify, define, and track all requirements, thus ensuring seamless integration, precise design validation, and system certification.

Test Facilities
Candent Technologies has a complete small engine dynamometer test cell facility, capable of performing tests on turbine engines with a thrust capability of up to 2,000 pounds, or turboshaft engines up to 1,600 hp.

Scope of Services/Product Range

Candent Technologies is engaged in designing and developing propulsion and power systems technology, including: microturbines up to 250 kW; small gas turbines in the 300 kW (400 hp) to 2,000 kW (2,750 hp) size class; waste heat energy recovery systems up to 5.0 MW; and small heavy fuel reciprocating engines up to 15kW. Representative R&D projects below show the breadth and depth of our experience:

» DoD (Army) SBIR Topic No.A03-069, Phase I, II, and II+: designed, fabricated, and tested advanced 750-hp full scale, prototype high efficiency gas turbine engine

» DoD (Navy) SBIR Topic No.N092-122 Phase I, completed preliminary design of twin gas turbine propulsion system for 11m boat, using Candent designed high efficiency 540 hp engines and high power density 75kW Auxiliary Power Unit to power Candent designed Hybrid Electric Drive system

» DoE SBIR Topic No. DE 10(d), Phase I and II, carried out design and fabrication of prototype 1.4MW turbomachinery hardware for very high efficiency (50% thermal), including additive manufacturing of highly complex turbine components, and critical ceramic turbine parts

» DoD (Navy) SBIR Topic No. N103-229, Phase I and II, designed waste heat energy recovery system for DDG51 destroyer Ship Service Gas Turbine Generators (SSGTG), and completed fabrication and testing of prototype turbomachinery components

» DoD (Navy) Topic No. SBIR N121-054, Phase I and Phase II, ongoing design, fabrication, and testing of a heavy fuel engine and propulsion system for the Multi Use Small Craft Littoral (MUSCL) small Unmanned Surface Vehicle (USV), as well as system integration, construction, and testing of the prototype boats

» DoD (Navy-MCSC) SBIR Topic No. N132-086, Phase I & II, ongoing design and configuration of high power density 300kWe prime power system for directed energy weapon system

» DoD (Air Force) SBIR Topic No. AF161-072, Phase I, ongoing analysis, concept development, and preliminary design of prototype structurally embedded heat exchanger to improve turbine airfoil cooling

Markets

- Military Applications
  - Prime Power for directed energy weapon systems
  - Marine propulsion, distributed, auxiliary, and emergency power systems
  - Mobile electric power
  - Micro grid baseline power
  - Manned and un-manned aircraft propulsion, fixed & rotary wing
  - Aircraft Auxiliary Power Units (APU)
  - Advanced amphibious and land vehicles
- Commercial Applications
  - Marine propulsion, distributed, auxiliary, and emergency power systems
  - Mobile power, distributed generation, emergency & peaking power
  - Aircraft propulsion and Auxiliary Power Units
  - Oil and Gas
  - Co-Generation
  - Industrial chillers

Government Customers

- Department of the Army, AMRDEC/AATD, Ft Eustis, VA
- Department of the Navy, ONR, Code 33, Arlington, VA
- Department of the Navy, NSWC, CD-CCD, Little Creek, Norfolk, VA
- Department of the Navy, NAVSEA, PEO Ships/PMS 320 (NSWC, CD)
- Department of the Navy, MCSC, Quantico, VA
- Department of the Air Force, AFMC/AFRL, Wright-Patterson AFB, OH
- Department of Energy, Office of Science, Washington, DC

Profile

Senior Management

Hernando Munevar, President and CEO, is a company co-founder with over 40 years of engineering and management experience in the Aerospace and Defense Sector. His background includes a successful career as a US Air Force officer, where he served in operational environments as well as in the acquisition commands. Following his departure from the military, Mr. Munevar joined General Motors, Allison Gas Turbine Division, now Rolls-Royce Corporation, where during his 20 year career as a senior engineer and manager for numerous turbine engine programs, he served in senior roles such as Chief Engineer, Director of Research and Technology, Director of New Product Introduction and Director of Value Engineering. Mr. Munevar holds BS and MS degrees in Aerospace Engineering from the University of Colorado (Boulder), and a Master's degree from the School of Business at Central Michigan University.

Emanuel Papandreas, Vice President of Engineering, is also a Candent Technologies co-founder, and has over 35 years' experience in the gas turbine engine industry, including time with Pratt & Whitney, Teledyne, Allison, Belcan, and Rolls-Royce Corporation. As a patent holder, Mr. Papandreas is an expert in design and development of gas turbine engines, small heavy fuel reciprocating engines, and small racing boats. Throughout his career he has progressed from his initial assignments as a structural analysis Specialist into component and engine design, preliminary design, installations, and system integration, eventually reaching progressively more senior leadership positions in engineering and program management. Mr. Papandreas holds BS and MS degrees in Mechanical Engineering from the University of Florida.

Javier Camba, Director of Business Development, is a co-founder as well, and has over 30 years' experience in the Aerospace and Defense industry. He brings a wealth of experience in the marketing, logistics support, and application of small gas turbine engines in helicopters and fixed-wing aircraft, from both the engine manufacturer and airframer's perspective. In 1987 he began his career at Bell Helicopter Textron, Inc., Texas, and in 1990 became a consultant for a number of years, counting among his clients Composite Technologies Corporation, New Mexico State University, and Arco Oil and Gas Company. Mr. Camba joined Allison in 1995, which was later purchased by Rolls-Royce, where he served in a number of positions of increasing responsibility, including Manager, Military Marketing for Helicopter engines, and then joined Candent Technologies in 2001. Mr. Camba holds BS and MS degrees in Aerospace Engineering from Texas A&M University.

Hernando Munevar
President & CEO
317-336-4478 Office
317-442-0624 Mobile
hmunevar@candent-technologies.com

Manny Papandreas
Vice President Engineering
317-336-4477 Office
317-514-5571 Mobile
mannyp@candent-technologies.com

Candent Technologies, Inc.
6107 West Airport Blvd, Suite 190
Greenfield, Indiana 46140
www.candent-technologies.com