

**JOHN BRODZIAK / P.E. , Senior Mechanical Engineer**

**Education**

*BS in Industrial  
Technology*  
University College of NY

*BS in Mechanical  
Engineering*  
UNC- Charlotte, NC

*MS in Mechanical  
Engineering*  
UNC- Charlotte, NC

**Registration**

*Registered Professional  
Engineer: Tennessee +  
Virginia*

John Brodziak has spent most of his career working in large industrial facilities, working with everything from nanometer-scaled optics to systems for aircraft carriers. His experiences include facility engineering, project engineering and management of multi-million-dollar capital industrial projects, to system design engineering and management. For the past ten years, he has taken on senior roles in consulting for large industrial clients. He is a subject-matter-expert in medium and high-pressure steam system, pumping stations, liquid and gas industrial piping systems, per ASME B31.1 and B31.3 codes. He also has a strong background in industrial control system development including PLCs and Distributed control systems (DCS), with an intuitive understanding of control systems and their connection and interaction with mechanical systems.

*Project Responsibilities:* Project management, gathering and analysis of data, feasibility studies, design-team management, project engineering from concept to commissioning, HAZ-OP analysis, root-cause analysis, cost estimating, equipment specifications, functional specification development, construction management, star-up technical check-out, commissioning, and owner representative/liaison.

**RELEVANT EXPERIENCE**

**Teledyne Brown  
Engineering, VAR**

*Oak Ridge, Tennessee*

Chilled-water system design to provide cooling for a variable –flow, primary/ secondary VAR closed-looped system for optimal temperature control. Also performed calculations and equipment associated with the VAR cooling system.

**Scapa**

*Knoxville, Tennessee*

Worked with client during active production for fast-tracked equipment connections to meet scheduling requirements, maintaining budget, avoiding pauses in production and by collaborating with owner and other disciplines regularly to avoid any miscommunication. Mechanical designs consisted of vacuum systems, air service to each piece of equipment cell and confirm total equipment compressed air loads to verify total CFM capacity.

**Materials +  
Chemistry Lab**

*Oak Ridge, Tennessee*

Complete HVAC design for 29,000 square feet for offices and high tech laboratory spaces with ventilation for laboratory test hoods.

**Kawasaki**

*Morristown, Tennessee*

Design process water cooling system, aluminum casting furnaces. Design cooling system based on flow rate of die cast furnaces that include pump placement, cooling tower location and piping. Design priming systems to have separate supply piping systems and common return for new cooling tower.