

## 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*  
TN, NC, KY, AR + VA

### Teledyne Brown Engineering

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### Scapa

John Brodziak has spent most of his career working in large industrial facilities, designing 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, start-up technical check-out, commissioning, and owner liaison.

## RELEVANT EXPERIENCE

### *Oak Ridge, Tennessee*

Designed for a variable-flow, primary/secondary closed-looped system for precision temperature control of production equipment. Performed calculations and equipment specification associated with the facility cooling system. Designed specialized high-efficiency filtration HVAC system to provide safe working environment for equipment operators. Designed high output compressed air system generating (1,1,2) spec air for process, along with other inert gas distribution systems. Participated in Haz-Op review to ensure robust systems.

### *Oak Ridge, Tennessee*

Conducted energy usage analysis for new service installation of development process equipment. Designed chilled-water cooling system for process equipment. Designed energy-efficient, high-temperature venting systems with HEPA filtration and variable-speed exhaust blowers. Completed calculations for relief valve and rupture disc sizing and required inlet and outlet piping.

### *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, chilled-water systems, high quality (1,1,1) compressed generation and air distribution system for each piece of production equipment. Designed HVAC system for Class 8 Pharmaceutical production Clean Room.

## CONTACT

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