

CONSUMER GOODS MANUFACTURING

TAI is a full-service engineering firm that has served the **Consumer Goods Manufacturing Industries** with Engineering, Management and Technical Services since it's establishment in 1989. Our extensive technical expertise has enabled our clients to design, build, operate and maintain world class facilities over the last 30 years.

TAI is headquartered in Baltimore, MD, and has offices in Dallas, TX, Phoenix, AZ, and Wilmington, DE.



ENGINEERING

- Process & Mechanical
- Electrical, Instrumentation & Controls
- Automation & Systems Integration
- Packaging & Material Handling
- Structural & Civil
- Buildings & Facilities (MEP)



MANAGEMENT

- Project Management
- Construction Management
- Procurement Services
- Design-Build & Turnkey Solutions
- Staff Augmentation
- Process Safety Management



TECHNICAL SERVICES

- I&C Field Services
- 3D Scanning
- Inspection & Test
- Site Safety
- Mechanical, Electrical and Steel Construction

SERVICES

- * Preliminary & Detailed Engineering
- * Scope Development
- * Construction Cost Estimation
- * Master Planning
- * Project Economic Analysis
- * Equipment Sizing & Selection
- * Start-Up / Commissioning & Validation
- * Facility Documentation
- * Peer Review
- * Calibration Program Development
- * Electronic Calibration Lab Services

CERTIFICATIONS

ISO / IEC 17025:2017 (International)
ANSI / NCSL Z540-1-1994 (National)
Certification #: AC-2055

CONTACT

TAI Engineering
600 Red Brook Boulevard
Suite 300, Owings Mills, MD 21117
Toll Free: (844) 261-1080

NOTABLE PROJECTS

■ Mixer Installation



TAI provided the development of an Electrical, Instrumentation and Control System installation drawing package for the Client's new mixer for batch production of several types of spackling compounds.

The batch mixer accepted raw materials from 20 different liquids lines and one powdered pre-mixer. Completed batches are then pumped to large production hoppers ready for packaging. TAI worked with the Client to develop the Standard Operating Procedure for this new line. Main tasks included electrical control system design, PLC process control logic development, HMI graphic development, PLC control cabinet design, PLC programming, and startup oversight.

cedure for this new line. Main tasks included electrical control system design, PLC process control logic development, HMI graphic development, PLC control cabinet design, PLC programming, and startup oversight.

CLIENT: CONFIDENTIAL
MARKET: Consumer Goods | Manufacturing
LOCATION: Baltimore, MD
SERVICES: • Drawing Package (I&C)
COMPLETED: 2015
VALUE CLASS: <\$1MM

■ Pressure Vessel Cooling Coil Modifications



TAI completed a design for the Client's new cooling coil configuration and support arrangement for both 7000-gallon reactor vessel located at their Williamsport plant and a 3000-gallon reactor at their Marengo Plant. TAI provided a modified coil design, along with the engineering calculations to determine the optimum method for mousing the new "serpentine" cooling piping.

TAI proposed drawings of the coil and fabrication details through spool pieces and a 3D model. TAI even performed a pipe stress analysis to determine if excessive stress is present in the design and can be eliminated with minor modifications. In addition, TAI provided design drawings to fabricate and install the piping and support systems after the stress calculations were completed.

CLIENT: CONFIDENTIAL
MARKET: Consumer Goods | Manufacturing
LOCATION: Williamsport, MD | Marengo, IL
SERVICES: • Drawing Package (I&C)
• Engineering
• 3D Modeling
• Stress Analysis
COMPLETED: 2018
VALUE CLASS: <\$1MM

■ New Distillery



TAI provided the complete Project Management, Electrical, Instrumentation, Automation, and Controls Design, and Implementation for the Client's new Distillery project.

TAI designed and integrated communication networks between PLC/HMI, ethernet controlled MCCs, and control components throughout two buildings. TAI also procured the HMI panel and programming along with documentation, system integration services, commissioning, startup, and on-going support.

CLIENT: CONFIDENTIAL
MARKET: Consumer Goods | Manufacturing
LOCATION: Baltimore, MD
SERVICES: • Project Management
• Electrical
• Instrumentation & Controls
• Construction Documentation
• System Integration
• Commissioning & Start Up
COMPLETED: 2017
VALUE CLASS: <\$1MM

■ Bulk Storage Tank Project



TAI partnered with the Client to install four (4) 100,000 gallon bulk tanks for the storage of high proof spirits. TAI supported this project from concept through start-up. TAI's work included relocating an existing roadway, building new tank foundations and containment, implementing new fire protection, fabricating the tanks on-site, installing supporting equipment, instrumentation, and piping, and integrating the tanks into existing systems. Operations associated with the new installation were also fully automated.

CLIENT: CONFIDENTIAL
MARKET: Consumer Goods | Manufacturing
LOCATION: Relay, MD
SERVICES: • Commissioning & Start Up
• Engineering Design
• Construction
• Automation & Controls
COMPLETED: 2013
VALUE CLASS: >\$5MM