Project Management Solutions

Beta-Tech Inc. (BTI) is an established engineering company with expertise in EI&C, Electrical, Instrumentation and Controls, Process Analyzers and Leak Detection. Complementary to these disciplines, BTI offers project management expertise with industry recognized professionals. Our project management professionals, PMP's/CAPM's, have experience across several industries including Energy, Manufacturing and Facilities infrastructure.

BTI employs project management best practices to all of our projects. We adhere to the best practices identified by PMI and the project management profession as a whole. Our project managers employ standards and processes resident in the BTI Project Management Office (PMO).

These templates and standard processes ensure our clients receive value for their investment, while maintaining efficient project controls and visibility on all aspects of the project's progress, budget and scope. Some of BTI's clients require a lean project structure and team, while others require more robust controls and reporting.

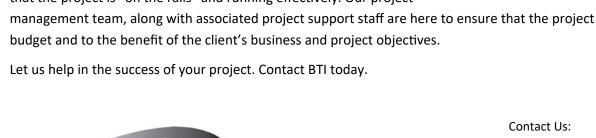
Services Offered

- **Project Charter Development**
- **Project Scope Support**
- **Project Scheduling (MS Project)**
- **Cost Estimating/Forecasting**
- **Risk Planning/Mitigation Strategy**
- **Procurement and Support**
- **Project Audits**
- **Commissioning Construction Mgmt.**
- Lessons Learned/ Close-Out

As such BTI provides a "fit for purpose" solution to project management by ensuring the rigors of our recognized PM requirements are adhered to, but in the fit-for-purpose size to meet our client's needs. Our project managers, certified PMP's or CAPM's, are great communicators and mediators; moreover, they are valuable representatives for our clients and make every effort to ensure the success of projects entrusted to BTI.

As representatives of the client, BTI is focused on being good stewards of our clients funds as well as the well being of the project success. Through project audits and project reporting, BTI provides confidence to our clients that the project is "on the rails" and running effectively. Our project

management team, along with associated project support staff are here to ensure that the project runs on time, on



Interactive Planning Session (IPS) Process Define Deliverables **Activities List Activity Details** - Sequence Activities - Link to MRP - Estimate Duration **Schedule Review** Review Schedule Submit to client

BTI Lead Engineer(s)

Project Controls

BTI Project Manager



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Automation Solutions

Beta-Tech Inc. (BTI) has been designing control and safety systems for nearly 30 years. We are a technology company that prides itself on being on top of the latest innovations and design trends to bring the best solutions to our clients. Our Engineers and Technologists have the skills and expertise to help you choose the best system solution for your needs. Whatever type of project, whether it is a new facility, replacement system, or a legacy system that requires support, our team focus is on supporting our client in achieving the best resolution possible.

BTI is a key player in the design and implementation of your facility control system. We provide input to design review

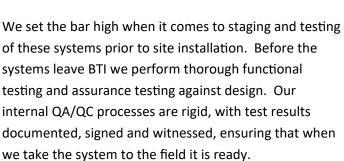
phases and P&ID development as well as actively participating in HAZOPs and SD Key review meetings. We develop control narratives, critical settings documents and shutdown keys to guide our personnel through the programming and configuration of the process control and safety systems.

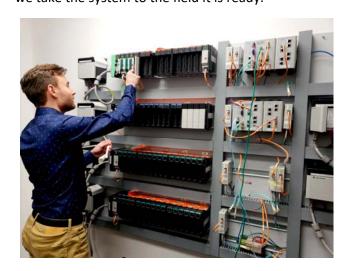


- Plant Control & Safety System Design
- Communications & Network Design
- DCS/PLC Programming
- SCADA Design and Implementation
- Commissioning & Startup (C&SU)
- Maintenance & Operations Support
- Migration & Support for Legacy Systems

Our site commissioning QA/QC processes are equally as effective. When the system is fully commissioned and a successful startup has been accomplished we provide training to operational personnel and continued support through remote VPN access portals. Our work is guaranteed and we are not finished our job until you are completely satisfied with the final results.

If you want the best, then call BTI. We look forward to working with you and your team.





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Electrical Solutions

Beta-Tech Inc. (BTI) is an established and successful engineering consulting company providing solutions in Electrical, Instrumentation and Controls (EI&C) and complementary disciplines. The Electrical Solutions Team has years of experience providing Engineered and well-designed electrical systems and construction work packages for industries such as energy, power generation, water treatment and waste water, and industrial/commercial.

If you are installing a new, replacing an old, or expanding a current control system, analyzer building, process building, compressor, or any other equipment with an electrical connection, BTI is here for you. We review the current state of the electrical system for



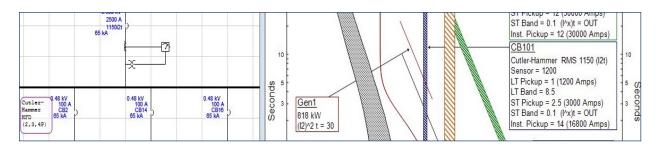
challenges that may manifest on system changes. Based on the equipment requirements and your own processes and standards, we design the electrical system and produce an electrical construction package with deliverables such as power distribution drawings, cable schedules, cable tray and equipment layout plans, and wiring diagrams.

Services Offered

- Electrical System Design
- Third Party Skid and Package Installation Design
- Low and Medium Voltage
 Power System Design
- Electrical Systems Modelling and Analysis (ETAP®)
- Hazardous Area Classification

For facilities without a power system, or for facilities requiring power system changes, consider the value BTI brings to the project. Our preliminary power system design supports planning, permitting, and equipment selection. We develop bid packages for electrical equipment, perform bid evaluations, and work with you to select preferred vendors. We collaborate with you and the vendors to refine the design of the power system to develop a solution that is truly suited to your needs.

BTI performs power system modelling and analysis using the powerful ETAP® software. From a quick system review, to more in-depth studies such as harmonic and short circuit analysis at the utility connection, the insight provided by this tool can be very valuable to the Engineering and design process. Our arc flash studies provide information to define the electrical safety requirements at the facility.



Many industrial facilities require new or updated records of the hazardous area classification. This record is critical to identify the electrical construction methods and operations activities permissible in a location that may contain an explosive atmosphere. Using calculations and determinations based on industry recognized practices, BTI creates fugitive emissions studies, hazardous location reports, and area classification drawings to satisfy regulators and electrical inspectors.

Our Electrical Solutions Team is ready to execute the electrical scope of your project, whatever it may be.



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Measurement Solutions

Beta-Tech Inc. (BTI) has an experienced measurement team with experts that can provide a range of services to help you. We have years of experience with a mix of hands-on and regulatory compliance expertise. We are the right choice for developing your Measurement Accounting Reporting Plan for your facility or, if you would prefer, we can simply audit and review your measurement scheme. We have worked with some of the major producers in Canada, and with the smaller producers as well, to ensure that regulatory requirements are met and, moreover, you will be confident that your commodity stream measurements and facility balances are accurate and trust-worthy.

BTI can help you develop your EPAP and provide audit services to make sure your self reporting obligations are met. It is our goal to make sure that the EPAP you develop and manage is the right fit for your needs. We will review your production facilities, your current QA/QC and reporting processes, and work with you to put in place adequate and workable processes and controls.

Services Offered

- MARP Development
- EPAP Program Development
- EPAP Audits
- Meter Walk-Downs and Compliance
- LACT Inspections and Assessment
- Trouble-shooting of measurement systems
- Daily Balances and KPI Automation and Reporting



BTI's measurement team can work with our clients' in-house team or in our Calgary office to provide the expertise you need while engineering and constructing new facilities involving metering or analyzer systems. As your knowledgeable representative, we will ensure your selected EPC has addressed all of the requirements of proper measurement and reduce your risk exposure to future retro-fit changes. We will review designs and ensure the correct and most cost-effective metering solution is provided.

Our depth of knowledge and experience from field device to production accounting systems is what sets BTI apart from our competitors. We will help you find a cost-effective solution and solve your measurement problems.

We look forward to working with you and your team.



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Instrumentation Solutions

Beta-Tech Inc. (BTI) is an established and successful engineering consulting company providing solutions in Electrical, Instrumentation and Controls (EI&C) and complementary disciplines. The **Instrumentation Solutions Team** is an integral part of BTI's I&C projects and provides support to other BTI disciplines as well as executing challenging instrumentation projects. Our experience providing solutions to our clients has its roots in the oil and gas and energy industry, from wellheads to production facilities, from compressor stations to pipelines. Our team members contribute as designers, leads, technical specialists and professionals to projects ranging from simple equipment installations to large greenfield projects and challenging brownfield retrofits.

Services Offered

- Instrument Specification
- Instrument Datasheets
- Flow Meter Sizing and Selection
- PSV Sizing and Specification
- Control Valve Sizing and Selection





BTI's Instrumentation specialists are dedicated professionals who will ensure all measurement and control devices are fully specified for the correct service and application, are safe, reliable, accurate and cost effective. BTI provides a full spectrum of instrumentation services including analytical design, instrument design, specification and sizing, preparation of instrument data sheets, instrument index/database creation, Shutdown Key / Cause & Effect documentation as well as calibration and commissioning services.

Our team has diverse experience from the infancy of pneumatic controls to the newest state of the art technologies. We understand the meaning of practicality and functionality and will ensure the right solution is specified.

Working with the other disciplines and leveraging the skills of BTI measurement specialists, analyzer specialists, electrical and automation teams, the Instrumentation team capitalizes on this unique <u>All Under The Same Roof</u> skilled team of professionals to give our clients significant value over any other company. At BTI, we have the experience and skills to deliver outstanding quality and high value to our clients.

Please contact us to discuss your next project.



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Process Analyzers Solutions

Beta-Tech Inc. (BTI) is an established engineering company with expertise in EI&C, Electrical, Instrumentation and Controls. Complementary to these disciplines, BTI offers process analyzer system expertise with industry recognized professionals. Our process analyzer professionals have experience across all industries. LNG, Oil, Gas, and Chemical process applications that require complex multi-stream applications for Gas Chromatographs and Mass Spectrometers or single stream applications for O2, NDIR or Laser type analyzers.



BTI provides process analyzer solutions from turn-key process analyzer systems for the oil and gas industry to after sales field support and troubleshooting. Since BTI is a non-vendor specific firm, we recommend the best analytical solution to meet your needs and budget.

Services Offered

- Turn-key analyzer solutions
- System Evaluations and recommendations
- Troubleshooting and service
- Client Support for Scope development
- Project/Construction Management
- Field Installation Support/Management
- International experience

Our process analyzer group can provide services for the development of project specifications, definition of the project scope of work, and requirements to meet your needs for each process analyzer application. With BTI's engineering team working in support of our analyzer group, our team can provide other project services complementary to the design work including fugitive emissions studies, procurement support, electrical and control system drawings, as well as process control system improvements or recommendations.

BTI frequently provides support to our clients to assist in troubleshooting problematic process analyzer systems, and providing a cost-effective solution. Our services can be specifically catered to our clients' standards and follow all the required regulatory and industry adopted standards for their region, province, state, or country. We understand that the reliability and robustness of the systems we design and implement is key to your project success and we are not happy until you are.



We are proud of, and firmly stand behind, our reputation for delivering a solution and product which meets or exceeds the clients' expectations. Unlike many other firms offering "niche" expertise, BTI's process analyzer group is not limited to one or two types of analyzers or manufactures. We look forward to working with you and your project team to ensure your project is a success.



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Leak Detection Solutions

Beta-Tech Inc. (BTI) is an established engineering company with expertise in EI&C, Electrical, Instrumentation and Controls. Complementary to these disciplines, BTI offers Pipeline Leak Detection assessment, software and services. BTI is working in a proactive role to support our clients and industry to respond to the increasing need for reliable, cost effective leak detection for liquid and gas pipelines.

BTI is a proud partner of ttc, s.r.o. in North America for the implementation and support services for their PipeMan leak detection solution. **PipeMan** pipeline leak detection software incorporates over 20 years of field proven safe and cost effective operations experience on all types of liquid pipelines.

PipeMan provides leak detection and location with multiple methods including:

- Dynamic simulation
- Model compensated volume balance
- Pressure wave detection
- Pressure drop leak detection

BTI provides turnkey leak detection systems operating standalone, or integrated with existing systems using industry standard communication protocols and standard components.

Safety and Loss Management Programs

BTI also offers implementation of leak detection programs with appropriate KPIs (people, processes and technology) and dashboards to monitor leak detection as recommended in API 1175, Pipeline Leak Detection Program Management.





We have a reputation of delivering a solution and product which meets or exceeds the clients' expectations, which we are proud of and firmly stand behind. BTI's leak detection group understands the regulatory requirements and compliance demands pertaining to CSA Z662 and API standards. We look forward to working with you and your project team to ensure your project is a success.



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Field Services

Beta-Tech Inc. (BTI) is an established engineering company with expertise in EI&C, Electrical, Instrumentation and Controls, Process Analyzers, Measurement and Leak Detection. Complementary to these disciplines, BTI offers a variety of field services by our technologists, certified tradesman and technicians. Our field services personnel have experience in the oil and gas sector from single wellsites, up to and including 60,000 bbl/day central processing facilities and pipelines.

BTI employs best practices on all of our projects. This is accomplished by execution of projects by qualified personnel using proven processes, procedures and templates. Our documentation captures and verifies the equipment data to ensure the installation meets engineering, regulatory and industry codes and standards. Action items, decision records and customer approval and signoff records are diligently kept and managed.

Inspection & Commissioning Services Offered

- Electrical Power & Distribution
- Power Generation/DG Grid Connect
- Electrical Heat Tracing
- Instrumentation
- Facility Instrument & Metering Walkdowns
- PLC Control System
- DCS Control Systems



Our technicians and tradesman cover all your bases when it comes to EI&C systems. Our electrical team will inspect your E-houses, Control Rooms, Process Buildings and overall facility ensuring everything meets engineering, codes and standards.

Our instrument technicians will inspect your facility to ensure the instrumentation matches the design and is installed as per the engineering and vendors specifications. A detailed inspection report is provided to give our clients the feedback they need to take corrective action.

Our control specialists work closely with your controls system contractors to perform Site Acceptance Tests, ensuring the facility control system has been correctly installed and terminated from the end device through the PLC hardware and properly represented on the facility local and control room HMIs.

BTI's field services personnel are a team dedicated to ensuring the quality, accuracy and integrity of the EI&C systems in your facility. To ensure your facility start up goes smoothly contact us today to discuss your project needs.



Contact Us:



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SERVICES WE PROVIDE

- Project Management
- Electrical Engineering
- Instrumentation Engineering
- Automation/Controls Engineering
- **◆ EPAP/MARP/Measurement Specialists**
- Commissioning and Field Services
- Process Analyzer Systems
- Leak Detection Systems