

Now Serving
Western Canada



C ONTACT INFORMATION

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“SERVING CANADA'S NORTHWEST”



AZTEC fosters a learning environment where engineers and technical staff gain practical experience and apply a solid constructability concept. Our technical personnel have practical experience with the common challenges faced when operating in Alberta and British Columbia.

AZTEC's field department and technical department continually leverage off of each others knowledge to generate practical designs that meet code requirements and client standards. The AZTEC office provides technical and administrative support to field services staff, often at no additional cost to the client.

AZTEC uses bid documents, contracts, and quality control programs to protect its clients from cost overruns and quality issues. We can ensure the project is done well for the price specified within the budgeted time. AZTEC stands behind the quality of it's work and absorbs risk by assuming liability for our client's projects.

From conceptual design through to commissioning, AZTEC will provide the necessary support to complete all major phases of engineering projects. From project management, detailed design, regulatory approvals, procurement and contract documents, our team of engineers and technical support staff are capable of completing the task . As well, AZTEC will provide management for all levels of construction.

Currently, AZTEC employs Project Managers, Project Engineers, Design Engineers, Engineering Technologists, Construction Managers, Environmental and First Nations Consultants, and Administrative Support.



VALUE MANAGEMENT & CONSTRUCTABILITY



What is Value Management?

Aztec Engineering Value Management is a formal and informal process to assure highest value by delivering all required functions at the lowest overall cost.

Value = Performance/Cost

What is Constructability?

The optimum use of construction knowledge and experience in planning, design, procurement, and field operations to achieve the overall project objective.



VALUE MANAGEMENT + CONSTRUCTABILITY

= BEST VALUE PER PROJECT

Aztec Engineering tools to ensure realistic budgets, identify and remove non-essential operating costs, improve and maintain optimum project quality process.

- ▲ Project objectives and priorities are established in the initial stages of planning & design.
- ▲ Constructability is emphasized to all project stakeholders: owners, supervisors, contractors.
- ▲ Conflict Resolution/unforeseen changes are based on project objectives.
- ▲ Local contractors and suppliers procured in a timely manner (construction sensitive time line).

***Project
Management***

We Have Solutions.

ACHIEVEMENT & CAPABILITIES STATEMENT



Some of our recent accomplishments...

- ▲ Project Management, design and routing for over 10,000km of natural gas and oil pipelines over the past 12 years
- ▲ Design and certification of innovative free-standing small wind generation towers
- ▲ Successfully engineering and design of some of the most complex and diversified facilities in the north encountering challenging climate & geographical locations
- ▲ Process equipment sizing including heaters, treaters, separators and separator/blowcase packages for up to 600,000 m³/d gas flow
- ▲ 3D modeling, finite element analysis, certification, and fabrication drawings of mobile pressure piping and the corresponding large truck deck structure
- ▲ Project management of multi-million dollar facilities
- ▲ Selection of pipeline routing through highly environmentally sensitive areas
- ▲ Covering a knowledgeable working area from the Northwest Territories to the Saskatchewan border, through BC & as far south as the USA border
- ▲ Instrumentation design for sweet and sour gas facilities, well sites, batteries and compressor stations
- ▲ Large turnaround project design, procurement, construction supervision on a sour gas processing plant with output of 50mmscfd in remote NE BC, generating over 150 stamped drawings
- ▲ Mechanical and Electrical design for many major oil and gas companies ranging from small to 20mmscfd facilities
- ▲ Partnering with multi-national engineering firms to provide local and regional support
- ▲ Design, equipment sizing, procurement, and management of the construction of a 16mmscfd gas processing facility
- ▲ Complex dispersion modeling for sour gas flaring for a 12% H₂S content well
- ▲ Reclamation and geotechnical considerations for hundreds of km of pipelines for large pipeline companies



P ROCESS PIPING DESIGN

AZTEC will provide a wide range of mechanical process piping . Our team of engineers and designers has extensive experience in providing conceptual designs of process piping systems and pressure vessels.

When designing a process system, whether it be process piping there are many factors to be taken into account: Design pressures, design temperatures, flow rates, product specifications and functionality. Process piping is the complex arrangement of piping, valves and instrumentation controls to convey the necessary production fluids from well sites, batteries, compressor station and processing plants.

Process piping designed by AZTEC incorporates all applicable codes and standards along with client specifications. Direct communication with the client and manufacturers is a key component with the overall design.

From concept and budgeting through design and installation our team will assist you with solutions.

Services include:

- ▲ Design Drawing Packages
- ▲ Up-to-date AutoCad Software
- ▲ 3D Modeling with Solidworks
- ▲ Process Design / Simulations
- ▲ Site Evaluations / As-building



We Have Solutions.



P

ROJECT MANAGEMENT

Aztec will provide technical support and act as liaisons between the client and the stakeholders. AZTEC will be primarily responsible for the daily monitoring of the project: Cost control, detailed design, regulatory approvals, procurement, contract documents, project optimization and troubleshooting.

Our team of engineers and technical personnel will provide the necessary support to complete all major phases of an engineering project.

AZTEC can also provide construction assistance. We have several qualified field consultants to manage the construction phase, ensuring the project is completed on time.

Services include:

- ▲ Project Cost Estimates
- ▲ Project Scheduling
- ▲ Facility/Process Design
- ▲ Regulatory Approvals
- ▲ Engineering Design Packages
- ▲ HAZOP Co-ordination
- ▲ Equipment Procurement
- ▲ Contract Documentation
- ▲ Construction Management



We Have Solutions.



C ONSTRUCTION MANAGEMENT

AZTEC will act as a liaison between the client and the construction phase of any project to ensure that the project is completed on time and on budget.

The Construction Manager is responsible for coordinating and managing people, materials and equipment while maintaining costs, scheduling and contracts. The Construction Manager will act within the best interests of the client but will also ensure the safety of all contractors and the general public.

AZTEC has been involved in numerous construction projects: Pipeline & Facility Installations, Gas Processing, Facilities Manufacturing, Manufacturing Plants, and Road Construction.

Services include:

- ▲ Direct Client Communication
- ▲ Safety Meetings
- ▲ Permits
- ▲ Digital Photo Documentation
- ▲ Notifications (Tie-ins, Crossings, Landowners, etc.)
- ▲ Quality Control Package
- ▲ Project Closure



We Have Solutions.



S COUTING

Aztec's specialized professionals conduct site specific field assessments to determine locations and routes for resource development. Consultations with appropriate governing bodies ensure the proposed development and future expansions, will not harm the environment.

Clients are provided with a complete site inspection, noting the various options for site location and access as determined by topography and existing dispositions.

Aztec coordinates surveyors and involves key parties such as aboriginal groups to ensure their interests are balanced with those of our clients.



Save time and money—ensure the smallest environmental footprint possible by scouting before surveying.

Once you're ready for the next step, our engineers will prepare all the necessary drawing, bid packages and equalizations for your project.

We Have Solutions.



M ANAGEMENT OF CHANGE

Management of Change is the process of ensuring that changes to equipment or process will not be harmful to the equipment being modified, surrounding equipment, personnel or the environment.

Our focus is to ensure any proposed changes meet all regulatory codes, company codes, best practices and safety regulations. By allowing us to take on the engineering role for proposed changes, your employees will be free to concentrate on keeping your plant, well sites and pipelines running efficiently and profitable.

Services include:

- ▲ Mechanical Engineering Design
- ▲ Process Engineering Design
- ▲ Regulatory Codes Compliance
- ▲ Equipment Specifications
- ▲ Scope of Work Packages
- ▲ Contracts
- ▲ HAZOPS
- ▲ Computer Aided 2D & 3D Drafting
- ▲ 3-D Modeling



Need to add a compressor to this site?

We Have Solutions.



R REGULATORY APPROVALS

Aztec will provide design, technical, and project management assistance for projects that require approvals.

Applications routinely prepared:

Energy Approvals

- ▲ ERCB Applications - Facility/ Pipeline
- ▲ OGC Applications - Facility/ Pipeline
- ▲ Complex dispersion modeling
- ▲ National Energy Board
- ▲ Noise Impact Assessments
- ▲ Fugitive Emissions Studies

Environmental Approvals

- ▲ Environmental Field Report (EFR)
- ▲ Notice to Director for Watercourse Crossings

Development Approvals

- ▲ Development Applications (all levels of government)
- ▲ Traffic Impact Assessment

Certification Approvals

- ▲ ABSA (process piping)



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I NSTRUMENTATION DESIGN

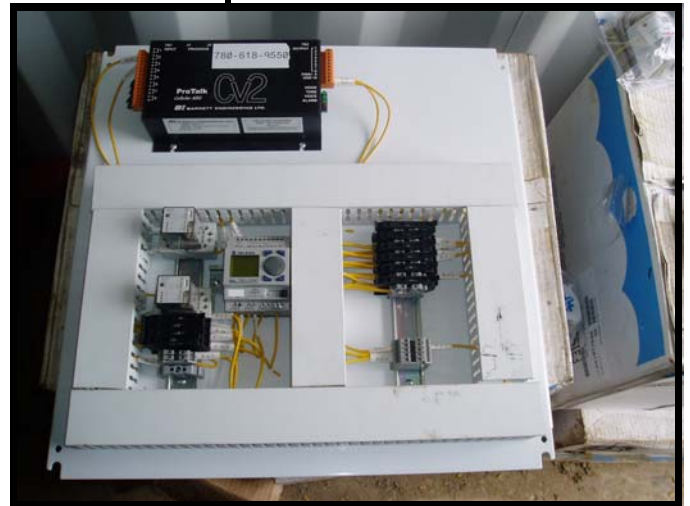
Instrumentation design is focused on the principle and operation of measuring instruments which are used in design and configuration of automated systems.

Aztec's instrumentation design process includes feasibility, schedule and quality control definition and analysis. The actual equipment and design used is fit to the specific needs of the project and client.

Aztec is involved from design, to equipment procurement, to installation; ensuring the client's specifications are met.

Services include:

- ▲ Conceptual Design
- ▲ Project Cost Estimate
- ▲ Panel Design
- ▲ Instrument Selection and Procurement
- ▲ Low Power Considerations
- ▲ SCADA Design



We Have Solutions.



H AZOPs

AZTEC has the training to lead HAZOP (hazard and operability) studies. HAZOP studies provide a systematic approach to look at each part of a process and possible deviations that can happen to that part. Classes of deviations that are examined include negative, quantitative, qualitative and substitutions.

Ninety percent of deviations identified are not confined to safety. These can also affect operability, product quality and productivity. HAZOPs are best performed at the design stage before construction has started.

Services include:

- ▲ HAZOP leader
- ▲ Training
- ▲ Record keeping
- ▲ Follow-up
- ▲ Recommendations
- ▲ Final Report



Would your program prevent this?

We Have Solutions.



S STRUCTURAL ENGINEERING

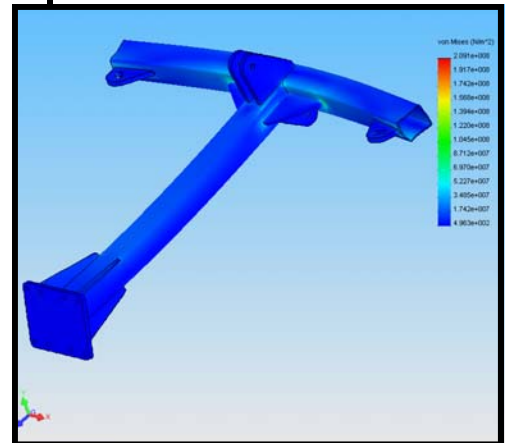
AZTEC will provide Structural Engineering services to ensure that the equipment used on the job-site is operated within the correct safe operating capacity or that the condition of the equipment is sufficient to maintain the original manufacturer's specified capacity rating.

For existing load bearing equipment, AZTEC can send an inspector certified by the Canadian General Standards Board (CGSB) to complete a structural inspection, including Magnetic Particle Inspection on the equipment.

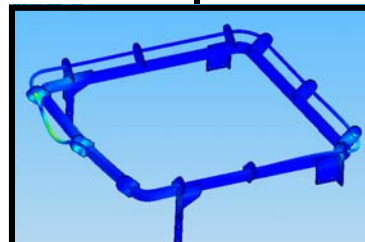
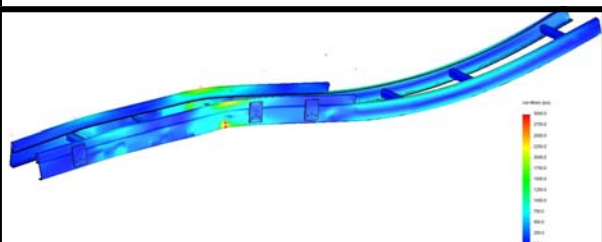
Alternately, if a project requires a custom fabricated load bearing device that requires certification, AZTEC will complete the required Engineering Analysis and certify the device to be operated within a specified safe working capacity utilizing finite element analysis software.

Examples include:

- ▲ Cranes, pickers, sidebooms, jibs, spreader bars, etc.
- ▲ Residential / Commercial building structures
- ▲ Fall arrest devices
- ▲ Custom lifting devices and assemblies
- ▲ Beam & Column analysis



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I NDUSTRIAL ENGINEERING

Industrial engineering determines the most effective way to use the basic factors of production—people, machines, materials, information, and energy—to make a product or to provide a service.

Aztec will find the most effective facility design in the aspects of facility planning and assist the client in providing a cost effective design that will increase productivity, and profitability in existing or new facilities.

Services include:

- ▲ Conceptual Design
- ▲ Project Cost Estimate
- ▲ Facility/Process Design
- ▲ HAZOPS
- ▲ Work Packages & Contracts
- ▲ Computer Aided 2D & 3D Drafting
- ▲ 3-D Modeling
- ▲ Finite Element Analysis



We Have Solutions.



MARKETING SERVICES

Aztec's experienced marketing and business development team will help you give your company the professional image you need. Having your logo and webpage published can be time consuming and expensive. Aztec's Business Development Manager and Graphic Designer can accomplish all of your marketing needs expeditiously at an affordable price, allowing you to spend more time working on your business.

If you have an idea or invention that you need to get to market, Aztec will provide the design drawings required for you to apply for intellectual property protection and patents. Aztec's engineers can then certify the device for service and complete feasibility and costing analysis to maximize your profit margin.

Services include:

- ▲ Web Launch
- ▲ Email Server Setup
- ▲ Market Analysis
- ▲ Marketing Consultation and Support
- ▲ Company Logo Design
- ▲ Business Cards



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