

# Industrial Sensors Technology and Informatics

Multi-disciplinary team of engineers, scientists and technologists specializing in the design of custom industrial measurement systems.

# CUSTOM SENSOR DESIGN AND PROTOTYPING

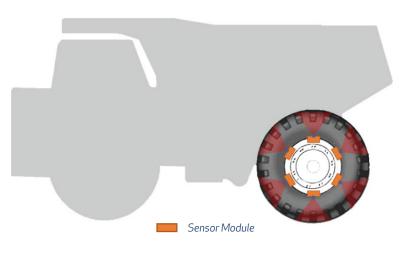
- Custom embedded sensors for equipment, field and process condition monitoring
- Prototype development and testing
- Field deployment, monitoring and preventative maintenance

### INDUSTRIAL SENSOR DEVELOPMENT

#### **Analyzer Design from Concept to Field Deployment**

- Measurement Concept Development
- Continuous Online Measurement for Diverse Applications
- Mechanical, electrical and instrumentation design.
- Process control and automation design.
- Analysis Software
- Process Sampling Systems
- Remote data transfer/IIOT Capabilities

Supporting research and industry advancement with purpose-built instruments; providing reliable and accurate process measurements.





Online Analyzer for Boiler Feedwater Quality

InnoTech Alberta, a subsidiary of Alberta Innovates, is a leading research and technology organization serving the

needs of industry, entrepreneurs and the public sector. Our leading-edge expertise and industrial-scale research and

demonstration facilities accelerate and de-risk technology

development and deployment for our clients with a focus

on industrial solutions and commercial applications.

#### FOR MORE INFORMATION, PLEASE CONTACT:

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Monitoring, Analytics & Informatics

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Visit us at: InnoTechAlberta.ca



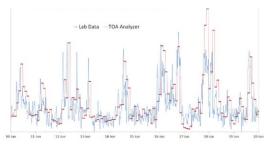
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### INDUSTRIAL SENSOR ANALYZERS SUITE

#### **Tailings Oil Analyzer**

- Measures bitumen levels in tailing and middlings
- Fully automated online measurement Analyzer
- Process Optimization and Cost Savings by reducing Bitumen loss to tailings
- Improve Environmental Monitoring and Compliance for Bitumen lost to tailings





Correlation of Lab vs TOA Tailings Data 1

NIR Ore Grade Analyzer

- Online absorbance measurement of near infrared spectra from 1400-2400nm
- Online measurement of bitumen and water contents in oil sands ore allows the operator to make process adjustments to optimize the extraction process

#### Analyzer Sustainability Support

- Adhoc or scheduled on-site maintenance and analyzer support
- Remote maintenance through wireless connections available
- Remote connectivity allows for continuous monitoring of machine data, identification of machine issues, tracking of trends, and prediction of potential failures



NIR Ore Grade Analyzer



Oil Sand Absorbance Spectrum for H<sub>2</sub>O and Bitumen

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### DATA ANALYTICS AND IIOT

- Predictive Maintenance
- Process Modelling
- Upset Prediction
- Process Optimization
- Hidden Process Insights



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