

SGS METALLURGICAL CAPABILITIES IN QUEBEC CITY

Delivering Technical Expertise for the Mining Industry



With over 75 years experience in Canada and a global presence, we have earned the reputation as the leading supplier of proven, technologically advanced metallurgical services. We provide companies and mines with bankable flowsheets and practical solutions.

For over 5 years, our metallurgical facility in Quebec City has been providing a gateway into unlocking the technical expertise provided by SGS for projects based in Quebec and around the world. Our metallurgical facility in Quebec City allows for easy hands-on project involvement for Quebec based projects and Eastern Canada. Our metallurgical team in Quebec City offers a wide range of metallurgical support including:

MINERAL PROCESSING

COMMINUTION

With grinding circuits typically being the largest or second largest capital investment for a mine, it is vital important to be confident in your grinding circuit design, without arbitrary safety margins, to ensure positive project economics. We offer several comminution tests that have been created to design grinding circuits or optimize existing operations including:

- Crushing, Grinding and Screening
- SAG Power Index (SPI) Testing
- Bond Ball Mill Grindability Testing (BWI)

FLOTATION

Flotation is one of the most extensively used and adaptable mineral processing techniques. The flotation process ultimately produces saleable concentrate grade from both simple and complex ores. Bench scale flotation test programs generate parameters including flowsheet design, flotation kinetics, reagent schemes and optimization and grind size.



Our flotation capabilities include:

- REE/Li Flotation
- Oxide Flotation
- Sulphide Flotation
- Mini Pilot Plant Testing

BENEFICIATION

Beneficiation is the process where ore is reduced in size and gangue separated from the ore. Separation of certain minerals can be efficiently achieved by taking advantage of the physical and magnetic properties. Our beneficiation capabilities include:

Magnetic Separation

- Davis Tube Magnetic Separation
- Satmagan
- Electrostatic Separation
- High Magnetic Intensity / Low Intensity Magnetic Separation (LIMS)

Gravity Separation

- Mozley Table
- Knelson MD-3 Concentrator (GRG, E-GRG)
- Falcon Separator
- Wilfley Table
- Dense Media Separation / Heavy Liquid Separation (HLS)
- Scrubbing
- Hydro Separator
- Hydrocycloning / Desliming

Size Classification

- Screens / Sieves
- Particle Size Analysis (PSA)
- Cyclosizer

EXTRACTIVE METALLURGY & HYDROMETALLURGY

Our extractive metallurgy capabilities include:

- Cyanide Bottle Roll Leaching
- Acid Leaching
- Precipitation
- Solution Purification

MINI PILOT PLANT TESTING

Pilot plant testing is used to demonstrate and confirm that the flowsheet developed at the bench is viable. SGS pilot plants are unique in that they operate in an integrated fashion. Our pilot plant capabilities include:

- Grinding/ Screening
- Flotation
- Magnetic Separation
- Gravity Separation

MINERALOGY

Mineralogy is the expert quantitative study of minerals using manual and automated techniques. Our mineralogy experience spans a wide range of elements, commodities and deposit types. We provide testing for a multitude of applications – from exploration, through to production, industrial hygiene, environmental applications and mine closure. Our mineralogy capabilities include:

- Optical Microscopy
- QEMSCAN
- XRD
- SEM
- Gold Department

GEOMETALLURGY

Geometallurgy is the integration of geological, mining, metallurgical, environmental and economic information to maximize the Net Present Value (NPV) of an orebody while minimizing technical and operational risk. Our geometallurgy capabilities include:

- CEET, FLEET, Production Optimization and IGS
- Geostatistics
- Domaining



PLANT OPERATIONS AND AUDITS

We have a well-deserved reputation for process audits, debottlenecking and optimization studies. Optimizing your plant operations can drastically increase your profits. Our systematic approach can determine if improvements can be made in your plant. Plant optimization studies range from basic audits and plant surveys, to complete troubleshooting problems.

CHEMISTRY LAB

Our metallurgical capabilities are supported by an internal geochemical network designed to provide rapid turn around time on all metallurgical products.


OUR COMMITMENT


We have an ongoing intensive program to monitor quality. Supervised by dedicated quality management personnel, our program is proactive and continuously monitored. We are committed to providing a consistent level of quality service and customer satisfaction that sets the industry benchmark in any location, urban or remote. The work done

by our highly qualified staff in Quebec City reflects our ongoing commitment to quality and customer satisfaction.

Our demonstrated success in metallurgical and process design has provided thousands of companies with effective flowsheets and practical technical solutions to processing problems. From that core of capability, we continue to provide the processing industry with innovative approaches to geometallurgy, process modeling, production forecasting and advanced control systems.

CONTACT INFORMATION

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WHEN YOU NEED TO BE SURE