

# SERVICES FOR THE **IRON ORE & STEEL** INDUSTRY

## OVERVIEW OF SGS' IRON ORE AND STEEL CAPABILITIES

Many companies in the iron ore and steel industry have integrated operations, combining the initial exploration for iron ore with the manufacturing of steel products or finished goods. SGS provides a comprehensive range of services to support most of the processes that are used in the exploration, treatment and trade of iron ore and steel. These services are available in Europe, West and South Africa, North and South America and Australia.

SGS' expertise in geochemistry, metallurgy and minerals inspection and trade can improve your operations, reduce costs and enhance product quality. SGS has the capability to provide you with a wide range of services including:

## EXPLORATION SERVICES

- Geochemical analysis services
- Mobile Metal Ion (MMI™)
- Project management
- Environmental baseline studies
- Orebody modeling and resource estimation
- Geometallurgy
- Metallurgical testing
- High definition mineralogy
- NI 43-101 and JORC Technical Reports



## PRE-FEASIBILITY & FEASIBILITY SERVICES

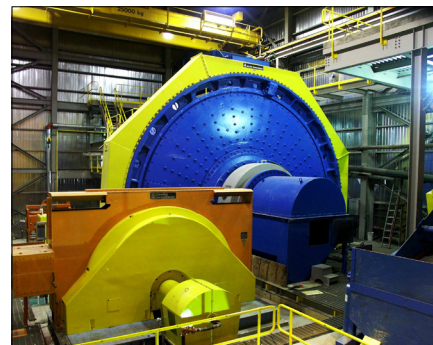
- Geometallurgy and ore variability studies
- Orebody modeling, resource and reserve estimation and audit
- Metallurgical flowsheet development and pilot plant testing
- Plant design services
- Design engineering
- Cost estimates for capex and opex
- Environmental services
- Mine closure planning
- NI 43-101 and JORC Technical Reports

## PRODUCTION SUPPORT

- Production forecasting and optimization
- On-site laboratories
- High definition mineralogy
- Proficiency testing programs
- Metallurgical accounting
- Plant evaluation and audits
- Process control and troubleshooting
- Advanced systems
- AHEAD asset management

## PROCESSING SUPPORT

- Beneficiation
- Hydrocyclones
- Spiral concentrators
- Magnetic separation
- Gravity separation
- Flotation
- SAG mill design
- Hydrometallurgy
- Metallurgical accounting
- Comminution and flotation simulation and modeling
- In-plant audits



## TRADE & INSPECTION SERVICES

- Analytical services
- On-site laboratories
- Umpire and settlement trade analysis
- Proficiency testing programs
- Marine services
- Quality and quantity inspection
- Collateral management agreements
- E-Reporting and E-Certification

## SAMPLING

- Sample collection and lot sub-sampling
- Manual and auger sampling
- Mechanical sampling systems

## ENVIRONMENTAL SERVICES

- Comprehensive environmental analysis
- Air, water and soil hazard analysis
- Environmental baseline studies, monitoring and auditing
- Water and effluent testing, treatment and management
- Acid rock drainage prediction and mitigation
- Environmental mineralogy
- Industrial hygiene, silica, dust, air quality and noise analysis
- Land reclamation and mine closure planning
- Greenhouse gas emission verification



## AUDITING AND CERTIFICATION

- ISO 9001:2008 Quality Management Systems
- ISO 1400:2004 Environmental Management Systems
- OHSAS 18001 Occupational Health and Safety Management System
- BS EN 16001:2009 Energy Management

## CONTACT INFORMATION

Email us at [minerals@sgs.com](mailto:minerals@sgs.com)  
[www.sgs.com](http://www.sgs.com)

