

Geometallurgical Practices for the Mining Industry

14th – 15th March 2024

Indaba Hotel Johannesburg & Live Webinar

Overview

The aim of the skills development intervention is to equip role players and decision makers in the in the Geometallurgical and related functions sectors with knowledge of the current geometallurgical practices. The focus of the sessions is on the design, implementation and management of geometallurgical programs along with the relevant safety and risk considerations. Collaborate, exchange ideas, and build valuable connections with peers and experts that will extend beyond the duration of the course.

Course Guidelines

Traditional mining approaches often fall short in maximizing the value of ore deposits. Geometallurgy offers a holistic and integrated solution, allowing you to optimize resource utilization and extract every ounce of precious minerals from complex ores. Geometallurgical programs empower you to make data-driven decisions throughout the mining process. By identifying mineralogical variations and geological heterogeneity, you can implement targeted extraction techniques, minimize waste, and enhance economic viability.

Who should attend

Geologists and Mineralogists
Metallurgical Engineers
Process Engineers
Mining Business Professionals
Plant Managers
Geotechnical engineers
Civil engineers
Engineers of record
Design Engineers
Planners
Safety, Health and Environmental practitioners
Surveyors and remote sensing experts
Other interested and involved persons

COURSE STRUCTURE

Setting up a Geometallurgical Program

- ✓ Campaign planning and objectives
- ✓ Phases in geometallurgical campaigns
- ✓ Planning and experimental design
- ✓ Site sampling approach/method
- ✓ Orientation study

Ore Characterisation

- ✓ Visual and hyperspectral imaging
- ✓ Bulk Mineralogy (hXRF, QXRD, XRF)

Process Behaviour Characterisation

- ✓ Blasting
- ✓ Dropweight Impact Breakage & Abrasion Test
- ✓ High Pressure Grinding Roll
- ✓ Grinding Bond Ball Work Index
- ✓ Fine Grinding
- ✓ Grind size selection
- ✓ Flotation
- ✓ Hydrometallurgical Leaching
- ✓ Gravity Separation
- ✓ Magnetic Separation
- ✓ Ore Sorting / Sensor Sorting
- ✓ Pyrometallurgy

Process Behaviour Characterisation

- ✓ Blasting
- ✓ Dropweight Impact Breakage & Abrasion Test
- ✓ High Pressure Grinding Roll
- ✓ Grinding Bond Ball Work Index
- ✓ Fine Grinding
- ✓ Grind size selection
- ✓ Flotation
- ✓ Hydrometallurgical Leaching
- ✓ Gravity Separation
- ✓ Magnetic Separation
- ✓ Ore Sorting / Sensor Sorting
- ✓ Pyrometallurgy

Small Scale Proxy Test

- ✓ EQUOtip test
- ✓ Point Load Index Measurement
- ✓ Impact Breakage SMC Test
- ✓ RBT Impact Breakage Test
- ✓ Piston and Di Compress Bed Breakage
- ✓ Grinding – Batch Operating Work Index
- ✓ SGS SPi test
- ✓ Mergan Work Index
- ✓ Comminution Index

Orientation Study Design and Data Analyses

- ✓ Experimental Design
- ✓ Rank and Compare Process Recoveries
- ✓ Economic Modelling and Business Model Development

Process behaviour Ore Type Class Definition

- ✓ Process modelling by Class
- ✓ Engineering Simulatiokn

Hypothesis Sample Study

- ✓ Experimental Test work

Mapping Process Domaining

- ✓ Mineral signatures
- ✓ Proxy tests
- ✓ Domain behaviour

Assessment of Geometallurgy Campaign and Application

- ✓ Potential Gaps
- ✓ Address Aims and Hypothesis

Developing a Production Protocol

- ✓ Brush Steps

Your Expert Facilitator Dr Nicolaas Steenkamp

Has been involved in the mining industry for over two decades. He has been involved in various aspects of the geometallurgical sector, ranging from mineralogical investigations, business plans, re-processing potential, technical studies, site inspections and laboratory audits. He has presented on geometallurgical related topics at various international conferences and published articles in several industry magazines. Dr Steenkamp also remains abreast of the relevant industry regulations and guidelines and assist clients to remain compliant.

In-house Training

We deliver the ultimate solution to meet your customised objectives, cutting your training costs, and dramatically improving your organisation's performance. In-house training packages tailor made to suit your organisation's needs.

Contact Hami on 074 937 5040 or e-mail hami@ibssolutions.co.za

HEAD OFFICE: 30 Hilltop Street Sandton View Office Park, Sandton, Telephone: +27 (0)11 025 7114



| | | | | | |
|-----------------------------------|--|---|--|---|--|
| Event Name: | | Geometallurgical Practices for the Mining Industry | | 14th – 15th March 2024 | |
| Company Name : | | | | Tel No: | |
| | | | | Fax No: | |
| Physical/ P.O Box Address: | | | | Dietary requirements/ allergies: Venue Option ONLY | |
| | | | | | |
| Vat no: | | Purchase Order No: | | | |

DELEGATE DETAILS

| | Delegate Name | Position | Email | Cell No. |
|---|---------------|----------|-------|----------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |

Terms & Conditions

The following terms and conditions will apply: The accepted applications to attend the IBS Intelligent Business Solutions courses are in every case subject to these terms and conditions.

Payment: All payments to be made directly to IBS Intelligent Business Solutions, payment is required in full 5 days from date of invoice or unless otherwise stated. Should payment not be made within five days from invoice, client will still be liable for course fee. No seats will be reserved, unless otherwise stated by IBS Intelligent Business Solutions. IBS Intelligent Business Solutions reserves the right to change speakers, program content, date and venue, due to unforeseen circumstances. The signed registration form is a legally binding document. The conference / workshop fee includes conference / workshop material, Lunches and refreshments (Applies to venue bookings only). IBS Intelligent Business Solutions will not be held liable for travel and accommodation.

Cancellations: Cancellation must be made in writing and received by IBS Intelligent Business Solutions at least 31 working days prior to the course start date. Substitutions will be allowed if notified at least 5 days prior to course date. Any cancellation instruction received less than 30 days prior to the course/workshop start date (this excludes weekends and public holidays), do not entitle the cancelling or transferring delegate to any refund or credit note and the full fee must be paid. Non-attendance on all or any one of the workshop days without written cancellation will result in no entitlement to any refund or credit and the company / delegate will be liable for the full fee.

Indemnity: IBS Intelligent Business Solutions is absolved and indemnified against any loss or damage as a result of alteration or cancellation/postponement of any seminar arising from any cause whatsoever, including without limitation, any fortuitous event, Act of God, unforeseen occurrence or any other event that renders performance of the event impracticable or impossible. A "fortuitous event" includes, but is not limited to, war, fire, meals, riot, industrial action, extreme weather or another emergency.

Warranty of Authority: The signatory warrants that he/she has the authority to sign this Application and agrees to be personally liable to IBS Intelligent Business Solutions for payments falling due pursuant thereto should such warranty is breached. In the event that IBS Intelligent Business Solutions is obliged to act against the participant and his/her employer shall be liable for and shall pay all costs, including attorney and client costs and collection commission.

Personal Information: I hereby consent to giving my personal information to IBS to use my personal information to store and pass it onto third parties if necessary (CRM, LMS, QCTO, SETA, ETQA, SABPP & DHET). IBS has taken the necessary steps to comply with the provisions of the POPI Act and its regulations by conducting an impact assessment and developing a framework for compliance. In this regard, IBS warrants that it shall not use the information provided herein for purposes other than those set out in our privacy policy. IBS advises that in addition to the fields of information required below to deliver in terms of this agreement, it shall also require learner details in order to comply with the statutory requirements of, inter alia, the Skills Development Act and the systems requirements of our Learner Management System. In the absence of this information, IBS may be not able to deliver against its mandate. Furthermore, by accepting the terms of this agreement, you also understand and accept that IBS may have to further process the personal information received in this and other associated documents by transmitting it to other organisations as may be required such as SETA's, ETQA's, Professional Bodies and the like. If you or any data subject wish to engage with our Information Officer and/ or access our Privacy Policy. Privacy@ibssolutions.co.za

I acknowledge that I have read, understood and accept the Terms and Conditions (including Payment Terms) and hereby apply for registration on behalf of myself (if a single delegate) or on behalf of the undermentioned organization which I am duly authorised to represent.

This Document is Legally Binding

| | | | |
|--|--|--|--|
| Name of Organisation: | | Date: | |
| Name of person responsible for payment: | | Email: | |
| Job Title (specific): | | | |
| Signature: | | | |
| PAYMENT METHODS EFT | | Bank: First National Bank Account No: 62497828255 Branch Code: 250655 | |

I acknowledge that I have read and understood all the terms and conditions of my registration as is set out above. I / we further confirm that I / we give permission to receive future / upcoming marketing material from IBS Intelligent Business Solutions or its associated companies at the above email addresses and that I / we can OPT OUT at any stage if we no longer wish to receive your marketing material.

Please tick here to opt-in: