

HIGH PRESSURE GRINDING ROLLS TESTWORK

SGS MINERALS SERVICES

SGS Lakefield Orestest Pty Ltd (SGS) was originally founded in 1993 as Orestest Pty Ltd. SGS has since developed into a major metallurgical services organisation located in a purpose-built laboratory in Perth, Western Australia.

The laboratory is dedicated to providing high quality metallurgical testing across the broad spectrum of the minerals industry including:

- Gold ores
- Nickel laterites
- Base metal
- Iron ore
- Uranium ores
- Mineral sands
- PGM ores
- Rare-earths and other exotics
- Diamond ores
- Environmental services



SGS provides a comprehensive range of test work capabilities including bacterial leaching, crushing, screening, grinding, ultra fine grinding, gravity, magnetic & electrostatic separation, solvent extraction, electrowinning, flotation, pressure leaching, pressure oxidation, pressure acid leach and cyanide speciation. Pre-feasibility studies, on-site diagnostic metallurgical services, environmental testing and analytical services are also included in our range of capabilities.

HIGH PRESSURE GRINDING ROLLS (HPGR)

SGS can provide HPGR testwork using the recently installed Polysius SMALLWAL HPGR unit. The test machine has the following specifications:

- Roll diameter - 500 mm.
- Roll width - 300 mm.
- Roll type - studded – autogeneous wear protection.
- Installed power – 2 x 30 kW.
- Fully instrumented / PLC controlled / data logging.
- Maximum feed size – 20 mm.
- Batch sample process (less sample required).
- Testwork results suitable for scale up to Polysius industrial HPGR.



ADVANTAGES OF HPGR

- Energy efficient comminution process.
- High single pass reduction ratios.
- Mature technology.
- Potential capital and operating cost reductions in full scale plants compared to other comminution technologies.

SAMPLE SIZE

- Each test requires approximately 120 to 150 kg of feed that has been crushed to minus 20 mm.
- A minimum of five tests are normally performed at different pressing forces to evaluate an ores suitability to processing by HPGR technology.

SCALE UP OF TESTWORK RESULTS

- Scale up of test results to size industrial Polysius HPGR units is not conducted by SGS.
- Clients should supply the SGS testwork report to the Polysius Division of ThyssenKrupp Engineering (Australia) Pty Ltd for recommendations on Polysius HPGR.



For more information, please contact us:

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