

Mineral Processing Expertise and Equipment at the Ian Wark Research Institute

The Wark™ manages a full range of equipment and expertise relevant to the minerals industry. The collective expertise of research and technical staff is coordinated and applied to short and medium term industrial consulting, as well as strategic research.

The Wark personnel have comprehensive experience in mineral separation including flotation of ores containing base and precious metals, coal, oxide and industrial minerals together with a wide range of plant experience. Staff also have experience in physical (magnetic and gravity) and chemical (leaching and recovery from

solution) processing of a wide range of materials.

Minerals Processing Equipment Available

- Sample preparation including crushing, grinding and screening, riffing to sub-samples
- Classification including hydrocyclone separation to 5µm
- Grinding and flotation at batch and 5 kg/h pilot scale, with automated reagent addition, regrind mill and column flotation
- Wet and dry magnetic separation
- Gravity separation using shaking table and centrifugal separators

Plant Diagnostics

- 50 plant surveys conducted at flotation plants in Australia and overseas since 1988
- Pulp and solution chemical analysis
- Flotation cell hydrodynamic analysis
- Modelling of plant circuits and individual cells
- Surface analysis of value and gangue minerals

Analytical Facilities

- Particle sizing
- Scanning Electron Microscopy with Energy Dispersive X-Ray Analysis
- Time of Flight Secondary Ion Mass Spectroscopy
- FTIR, UV-Vis Spectroscopy
- X-Ray Photoelectron Spectroscopy
- X-Ray Diffraction
- Rheology determinations on slurries

Confidentiality Statement

The Wark ensures the complete confidentiality of your projects. Confidentiality agreements are available if required.



SCIENTIFIC SERVICES

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