



Assessment of a metal recovery plant process modification

THE PROJECT

The client required an independent 'value in use study' and 'plant processing trial' to consider the effect of a process modification at their metal recovery plant.

The Materials Processing Institute brought together a project team of specialist researchers who carried out a comprehensive sampling exercise followed by chemical and mineralogical characterisation.

The research programme also included economic modelling, materials handling, processing assessment and chemical analysis. The research resulted in:

- An economic map comparing the processes before and after modification
- Proof of the principle of enhanced product separation through a representative tonnage sampling exercise followed by offline processing
- Chemical characterisation and mineralogical analysis of products using XRF, SEM-EDX and water displacement analysis



THE OUTCOME

The study and trial has:

- Identified that the process modifications are resulting in a higher value added product
- Generated recommendations for the potential recycling of by-product within the process
- Identified the critical control factors required to remain within limitations of the process when used in the product stream

This project has resulted in the verification of the improved metal recovery process adopted at the plant, which has led to a more efficient and easier to manage operating process. The research has also identified additional process enhancement opportunities.