

Exxaro Resources – Namakwa Sands



Client: Exxaro Resources
Location: RSA
Commencement: 2009

Capability Groups: Mineral Processing
Completion: 2011

Services Provided

- Process equipment supply
- Process equipment commissioning
- Operator training

Highlights

- Efficient Zircon recovery
- Compact Kelsey Centrifugal Jig Plant
- No disruption to SCP



Superior Technology

The Kelsey Centrifugal Jig (KCJ) is enabling Exxaro's Namakwa Sands Secondary Concentration Plant (SCP) in South Africa to efficiently recover Zircon minerals from stockpiled tailings material.

Following extensive laboratory testing at our Australian laboratory and on-site, a KCJ Pilot Plant was installed at Namakwa Sands in 2010 to recover Zircon from stockpiled Quartz rejects material.

Due to its modular configuration, the KCJ Pilot Plant was transported in shipping container sized modules enabling rapid assembly and start-up with minimal site preparation.

Test Results

Performance from samples gathered from sample points incorporated within the Pilot Plant confirm that Zircon concentrate material, with an average grade acceptable for further processing through the mineral separation plant (MSP), has been produced at Zircon recoveries equivalent to or better than those achieved by reprocessing through the SCP. Production rates are in the order of 3-5 t/h of Zircon concentrate.

KCJ Performance Compared to Reprocessing through SCP

- Faster results due to single stage processing compared with multiple processing stages for the SCP
- Higher zircon recoveries at the required concentrate grade due to high separation efficiency in the KCJ
- No disruption to steady state performance of the SCP
- Relatively small KCJ footprint

