

Herculano – 3.5mtpa Beneficiation Plant

Iron Ore Processing.

In 2005 Mineral Technologies was engaged to deliver a technology package to Herculano in Brazil. This was followed by successful commissioning of a two-stage spiral circuit.

The spiral circuit totalled 216 twin-start spiral separators and achieved concentrate grade and production capacity.

- Fully integrated processing solution.
- In field pilot-scale spiral testing.
- Plant design including feed hopper, trommel screens, tailing and concentrate stacking.
- Process flexibility to treat blends of up to three feed streams.

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Client Herculano

Location Brazil

Capability Groups Mineral Processing

Commencement 2005

Completion 2006

Services Provided

- Metallurgical testing
- Flowsheet development
- Basic and detailed plant design
- Process equipment supply
- Plant commissioning
- Operator training
- Procurement support

Highlights

- In field pilot-scale spiral testing
- Fully integrated processing solution
- Plant design including feed hopper, trommel screens, tailing and concentrate stacking
- Process flexibility to treat blends of up to three feed streams



Superior Technology

The scope of the project required Mineral Technologies to conduct initial on-site testwork to evaluate the capability of spirals to beneficiate the fine Iron Ore fraction - 1.2mm to 0.075 micron.

Mineral Technologies was selected to provide a technology package comprising process engineering design and process equipment supply. The package included:

- Beneficiation process flowsheet design for up to three feed streams
- Beneficiation process flowsheet
- Process engineer with process guarantee
- Mechanical, structural and civil design for the process plant including, feed hopper, trommel screen, tailings and concentrating stacking
- Preparation of equipment specifications for tender purposes and analysis
- Plant commissioning to prove plant production and performance
- Operator training
- Electrical and automation design

Mineral Technologies' work totalled 8,000 man-hours across various disciplines for design and construction support.

Successful commissioning of a two-stage spiral circuit totalling 216 twin-start spiral separators was completed in 2006 achieving both concentrate grade and production capacity.