

Iron Ore Sampling Plant & Upgrade for Kumba Resources

DemcoTECH Engineering successfully completed an installation to Kumba Resources iron ore sampling plant at the Saldanha iron ore terminal. The new brownfields sampling system, converted to a mass based system, reduces bias in the selection of material sizes for sampling purposes. The upgrade was carried out on a shutdown basis to minimise any demurrage fees. The plant meets ISO standards.

The upgrade project included installing new swing-arm samplers, conveyors, weigh hoppers and splitters as well as various structures and auxiliary equipment for the sampling process which feeds into the robotics sample laboratory. The export system is rated for approximately 10,000 tph.

DemcoTECH had been responsible for the primary and secondary cutter facility on a turnkey basis to supply the automated robotic facility in 2009 / 2010, which allows the sampling of a wide range of iron ore products, from fine material to lump ore for export purposes. This automated iron ore sampling plant enables Kumba to assure quality that complies with the world's highest International Standards Organisation (ISO) benchmark. During the process, samples are taken from the supply line, en route to the ships, and are introduced into a fully automated robotic laboratory where they are prepared simultaneously for physical and chemical analysis. As the sampling facility has two conveyor streams, single product loading is possible using both conveyor lines, or the loading of two vessels can be achieved with either the same or different products.

The sampling facility, which is an open access facility that is available for use by all iron ore exporters using Saldanha, enables exporters to have the physical and chemical qualities of iron ore products certified independently before they are loaded for export. The facility was designed to comply with ISO 3082 and facilitates a quick turn-around time.

Kumba is a member of the Anglo American plc group and exports to its overseas customers in China, Japan, Korea and Europe from the iron ore terminal, which began operating in 1976.

DemcoTECH Engineering is a specialist bulk materials handling and niche process plant company offering services from concept design through to project completion to the power generation, cement, mining, metallurgical, manufacturing and port handling industries. Services include conceptual design, feasibility studies, design, engineering, procurement, expediting, construction and commissioning. Plant supplied by DemcoTECH includes troughed conveyors, air-supported conveyors, pipe conveyors, rail-mounted slewing boom stackers, pivot boom conveyors and mobile conveyors.



Client	Kumba Resources
Commodity	Iron Ore
Contract Type	Turnkey
Duration	October 2010 – May 2011
Location	Western Cape Province, South Africa

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