



Innovative Iron Ore Processing Systems for Flagship Bellzone Project

Jersey based mining company Bellzone has appointed washing plant specialists CDE to design and supply a pioneering iron ore system in order to increase efficiencies in their production process.

Bellzone are currently developing two extensive iron ore assets in Guinea, West Africa: Forecariah and Kalia. A 15-year mining licence has recently been granted to the company for the vast 319km² Forecariah site, with output expected to reach 4 million tonnes per year by 2014. The current equipment on site comprises a crushing and screening plant. Presently, the fines produced from this plant have lower iron content which adversely affects the quality of the material and its suitability for resale. Consequently, CDE Global have been chosen to develop a tailored iron ore wet processing system that will effectively remove the ultra fine fraction to ensure that the remainder of the crushing and screening plant fines have a high enough iron grade to be sold directly.

CDE quickly identified the need for low grade fines to be efficiently separated at 1mm to produce a +1mm product which can go direct to port, with the finer fraction passing to the CDE Evowash to remove the Gangue, therefore upgrading the entire fraction to a saleable product.

The effective removal of contaminants, will consistently maintain a +58% Fe level from the low grade fines stock. A highly efficient process producing minimal waste ensures that a high product yield is maintained. An Aquacycle Thickener water recirculation system will also be incorporated to effectively recover the process water, again enhancing efficiency and maintaining a compact footprint throughout the entire process.

With a 250 tonne per hour feed rate of low grade fines the washed product from the CDE plant will be directly exported for the Forecarish Guinea Mining SA operation. Commenting on the project, Bellzones Process Manager Rod Davies said “CDE were the chosen providers on this project because of their high level of expertise in wet processing technology and their ability to develop and produce high quality, integrated modular solutions. One of the most imperative factors for us was to source a provider that could develop a modular system which is suitable to transport easily, erect quickly on site and operate in a remote location”.

Over the last 5 years, the range of equipment that CDE offer iron ore processors has increased significantly with the introduction of the M2500 mobile processing system being one of the most significant developments. “Our Mining equipment range provides excellent solutions and delivers significant advantages to our many customers in the iron ore processing sector” explains CDE Strategic Projects Manager Dermot Murphy. “In the case of Bellzone Mining, a fast track installation with a high quality product was required. We are able to provide a tailored solution for Bellzone bearing in mind that plant availability coupled with a reduction in maintenance requirements is vitally important, particularly due to the sites remote location”.

Another key factor was the CDE ProMan Project Management system with on-going support available from initial design stage, through to



“ CDE were the chosen providers on this project because of their high level of expertise in wet processing technology and their ability to develop and produce high quality, integrated modular solutions.”

manufacturing, logistics, installation, commissioning and continuing plant management.

“Through the ProMan system the customer is given a dedicated Single Point of Contact for the duration of the project which takes them through every stage from plant design and production in the first instance to training and long term performance support” explains Dermot Murphy.

Further information on the iron ore washing systems available from CDE can be found on their website at www.cdeglobal.com



“ We are able to provide a tailored solution for Bellzone bearing in mind that plant availability coupled with a reduction in maintenance requirements is vitally important, particularly due to the sites remote location.”

