Luita Copper and Cobalt facility

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The first of its kind in africa

Eurasian Natural Resource Corporation PLC is a FTSE 100 listed, globally diversified natural resources group, with integrated and low cost mining, processing, and energy, logistical and marketing operations.

ENRC operates in Kazakhstan, China, Russia, Brazil and Africa (the Democratic Republic of Congo, Zambia, Mozambique and South Africa). ENRC acquired Central African Mining and Exploration (CAMEC)'s shares towards the end of 2009 for mine operations in the DRC including Boss Mining SPRL and part of the deal was the world class copper and cobalt facility in the remote Katanga Province of DRC.

The multi-million state-of-the art Luita Copper and Cobalt plant is one of the largest copper and cobalt processing plant in Africa, and the largest cobalt facility in the world. In the process of becoming the biggest and most sophisticated operation of its kind in the copper rich DRC, CAMEC (the previous owners) built a 50 000 m2 production plant making it the biggest under-roof facility of its kind in the continent. The facility entail the construction of a dense medium separator (DMS) plant with a 150 ton per hour feed capacity originally designed for diamond production and at full production the company will produce 5 000 tons per year making one of the biggest producers of concentrate cobalt.

In addition, the heap leach process is being used for cobalt production, based on its cost-effectiveness, suitability for African conditions and high recovery rates. Heap leaching of both cobalt and copper involves heaping the crushed ore and irrigating it with dilute sulphuric acid leach solution. The solution percolates through the heap, leaching out the metals and holding them in solution while the leach solution is collected in HDPE lined pans.

The plant is the first private copper plating operation in the DRC and to ensure a sufficient, stable electricity supply to its facilities, CAMEC installed private overhead power line- 26 km line of 110 000V. In addition to the SX/EW plant and leaching facilities for both copper and cobalt, the processing plant comprises a 100 ton per hour milling section concentrator and 11 000 m2 of warehousing. "The decision to construct a massive under-cover facility was taken to maximise the flow of side by side processing operations, without weather interference, 24 hours a day and seven days a week", stated Laurent Decalion, the operations general manager for CAMEC.

The electrical substation was upgraded, a new expatriate and staff village, leisure facilities and administration buildings, installation of water treatment plant to produce, process potable water and an extensive road construction programme were carried as part of the $US100 million programme by CAMEC. Rapid installation of the metallurgical plant was achieved through the deployment of modular plant sections that made it possible to add on circuits without interrupting production. The plant is fully automated with PLC control, right down to the operation of the ball mill and access to the site is controlled by the latest fingerprint security technology

Power Bars Control, South Africa has had a long fruitful relationship with CAMEC, were involved in the development of Boss

Mining S.p.r.l., DRC (80MVA-Luita). The scope of the works involved the design and installation of a 110kV switchyard c/w 80 MVA TX'e; design and installation of a Leach Pad MCC; converted container for TX interface to DB, ceiling mounted 800mm (W) rack; MVA 11kV/ 525v power TX, Onan, 5-off positive primary off load tapswitch installation, including remote control box; a day/night switch for control purposes; a junction box; MV replacement CB; documentation, Schematics and lay-outs and the spares are Telemecanique switchgear in cubic certified and type tested panels.

CAMEC awarded Power Bars Control R14 million contract which commenced in July 2008 and was completed in February 2009.

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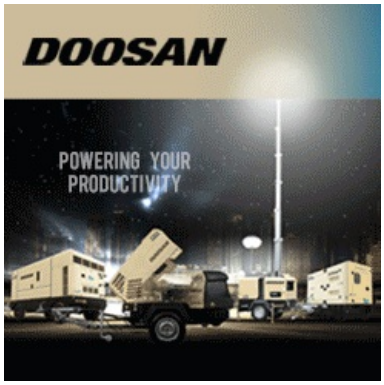

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