

POSTER SUMMARY

REPLACEMENT OF SULPHUR DIOXIDE TURBULATOR WITH AN EDUCATOR AT THE MALELANE REFINERY

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Abstract

The Malelane Mill is a sugarcane mill with a back-end refinery, the refined sugar output capacity of which is rated at 55 tons per hour. The decolourisation process, using the conventional carbonatation process, is followed by light sulphitation, using liquid sulphur dioxide. This process is adequate for producing bottler-specification refined sugar; however, the sulphur dioxide dosing system has a number of disadvantages: inconsistent liquor pH, high sulphur dioxide residual in the refined sugar, leakage of sulphur dioxide gas in the refinery and residual sulphur dioxide in the one-ton cylinders. A new system was successfully implemented, which replaces the turbulator system with an educator. The design, installation, control philosophy and cost benefits are discussed.

Keywords: sulphitation, liquid sulphur dioxide, fine liquor, refinery