

**Title**

Construction of inventory and production control and stocks from mass and metallurgical balance.

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**Abstract**

The plant field instrumentation or production and supply measurement techniques always has intrinsic random errors even if they are the most precise and accurate. This fact can lead to several problems inside a processing plant, since the mismatch of production indicators of different sectors, in the best scenario, leads to an internal discomfort. The main impacts are the production penalty of a processing plant, disorder in storage yards and loss of reliability on the market, leading to value loss of the company.

To minimize this problem is proposed a storage construction technique. The technique is based on the Lagrangian algorithm of errors reduction which allow the identification of sources with more errors. Besides that mathematical tool another tool that brings in consideration the process reality is introduced, the process dynamic simulation. Through this is possible to obtain infer process data that the field instrumentation can't measure and besides this the tool could be used with a mathematical method to mass balance closure and sustain a better process consistency.

With this technique the processing plant can have in a short term reliable data about what went in, what was produced and what was disposed. Data like these rise the reliability of the company and serve as instrumentation to support technician on process analysis.