

Industrial Experience on the Implementation of Real Time On Line Energy Management Systems in Sugar and Alcohol Industry

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Abstract

Sugar and alcohol market are increasing, due humanity needs to find alternatives for fossil fuels dependence. Brazil joins climactic and technologic features to place itself at the forefront of this industry.

Sugar-alcohol industry is professionalizing and rising portfolio of product and the electric energy became an important product of these new ones. In this context, an increase in energy efficiency and actions to maximize this product shows it essential for these sites become competitive and reach their goals.

Visual Mesa is a process on-line analysis tool to support decisions on energy reduction costs. This work describes how Soteica and Usaçúcar teams have modeled the site and implemented this new way to evaluate energy on this kind of industry.

A full model of the energy system has been developed. All the constraints have been included and the model is continually being updated with live data. Performance monitoring was done and it includes the tracking of equipment efficiencies by utilizing updated data for its continuous calculation.

By auditing the energy system, imbalances can be identified and reduced. Planning for a better operation of the energy system by performing case studies is usually done by using the validated model. As a result of the project, new sensors have been installed and a completely new way to evaluate energy on the site was implemented.

Keywords: sugar and alcohol industry, on-line energy analysis software, electric energy.

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