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GENERAL USE OF SPECIAL FURAN-EPOXY COATINGS FOR THE PROTECTION OF FLOORS, TERRACES, PASSABLE COVERS AND CONCRETE STORING TANKS (PAG. 4-11)

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This paper contains a summary of the experiences and results from a generalized application of furfural-derived resins in the protection, waterproofing and sealing of floors, terraces, passable covers, as well as of concrete tanks and general storing facilities for oil-derivatives storage. The tests carried out and their results are described. Also, reference is made to works conducted with these furan products in the protection and sealing of biogas concrete reactors that use as raw material the residual effluents and wastes of the sugar agro-industry.

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STUDY ON MICRO-CRYSTAL FORMATION IN MASSECUITES (PAG. 18-22)

Dr. Pedro V. Pérez González, Dr. Federico L. Falcón Rodríguez¹ & Dr. José Griffith Martínez²

It is usual that a good part of the sugar losses to final molasses is associated to the presence of micro-crystals therein. In spite of pan boilers' careful performance, it is in the vacuum pan, at the end of strikes, where they mainly form; so it becomes compulsory to improve their material working conditions to avoid micro-crystal formation.

The high size dispersion of crystals in the massecuite has its basic origin in the secondary nucleation that occurs just immediately before the discharge of the massecuite and not during its boiling.

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ALTERATIONS IN THE POTENTIAL YIELD VALUES OF SUGAR CANE (RPC) (PAG. 23-26)

Eng. Noel Gil Ruiz¹

One year after the implementation of the Quality Based Sugar Cane Price (SPCC) the assessment of process efficiency spread widely throughout the country, according to the percent utilization of the Sugar Cane Potential Yield (RPC). This was justified by the problems faced with cane weight control units at sugar factories, which lead to the application of certain indi-

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rect estimates in sugar accounting. This new form of evaluation favored the appearance of other problems, since the utilization percentage shows some lack of consistency, resulting from the way canes are crushed and from the quality they have on reaching the factory. The above-mentioned drawbacks are dealt with in this paper.

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DETERMINATION OF SPECIFIC DRAINAGE RESISTANCE COEFFICIENTS OF SUGAR CANE BAGASSE CELLULOSE (PAG. 34-39)

Noé Aguilar Rivera¹

Sugar cane bagasse, due to its anatomic/morphological characteristics and for being a basic waste product from an important sector like the sugar industry, has become the most important raw material within the pulp & paper sector in Mexico. Sugar cane bagasse pulps, however, have a limiting factor to their use: their low draining capability. Therefore, the measurement of properties like in-pulp draining time, porosity and the calculation of specific resistance coefficients for both bleached and unbleached pulps are key indicators for determining the response of such pulps in the washing system and leaf formation. This study focuses on the determination of the above coefficients and proposes the incorporation of long fiber from waste craft cardboard to improve the draining capability of sugar cane bagasse pulps.

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STUDY AND MODELING OF SOME VARIABLES THAT HAVE AN EFFECT ON THE AGRICULTURAL YIELD OF SUGAR CANE (PAG. 50-55)

Olivia Soto Fernández, Guillermo Gálvez Rodríguez & Antonio Sigarroa González¹

This paper studies the effect of some variables and agricultural yield modelling using data from sugar mills in Havana Province. The statistical analyses used were the Principal Component Analysis (PCA) and multiple regression analysis. The best fitted multiple regression equations were found. These equations have a predictive approach. The biological and agronomical implications of the results are discussed.

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