Title (en)

HIGH PRESSURE METHOD FOR PRODUCING PURE MELAMINE IN A VERTICAL REACTOR

Title (de)

HOCHDRUCKVERFAHREN ZUR HERSTELLUNG VON REINEM MELAMIN

Title (fr)

PROCEDE HAUTE PRESSION PERMETTANT LA PRODUCTION DE MELAMINE PURE DANS UN REACTEUR DE SYNTHESE VERTICAL

Publication

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Application

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Abstract (en)

[origin: WO2006013079A2] The invention relates to a high pressure method for producing pure melamine by pyrolyzing urea in a vertical synthesis reactor. The invention is characterized in that the synthesis reactor has three stages vertically arranged above one other, whereby: a) in the first i.e. uppermost stage, the smaller portion of the total amount of urea is introduced into the central tube of a first tank reactor whereby forming a first melamine-containing reaction medium; b) in the second i.e. middle stage, the first melamine-containing reaction medium as well as the larger portion of the total amount of urea is introduced into the central tube of a second tank reactor whereby forming a second melamine-containing reaction medium, after which; c) in the third i.e. lowermost stage, the second melamine-containing reaction medium is introduced into a vertical tubular flow reactor whereby forming a raw melamine melt that is subsequently processed in any manner whereby obtaining pure melamine. This makes it possible to achieve a more uniform conversion of urea, a more mild and corrosion-reducing supply of reaction heat, and for the reaction to be optimally carried out as well as to achieve a complete reaction of the urea in the melamine synthesis reactor. In comparison to other melamine methods, the invention provides a more compact, economical and efficient synthesis of melamine.

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