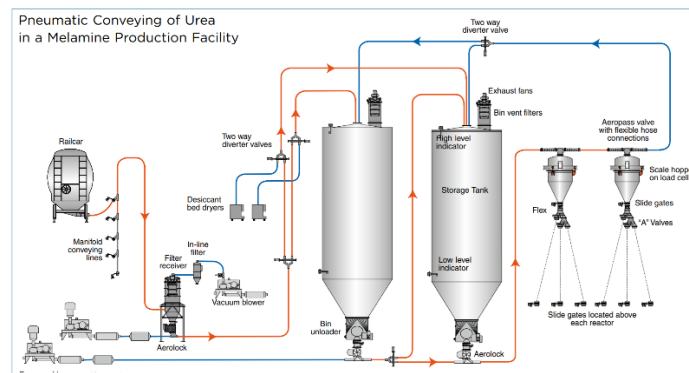


Loading and bagging control system for Gujarat State Fertilizer Corporation

Urea is produced in prills, granules, flakes, pellets, crystals and solutions, but it is traditionally marketed as prills or granules. The choice of the commercial preferred form is normally associated with its application, solubility, crushing strength and free-flowing behavior. The pneumatic conveying and storage of urea must take into consideration the abrasive, hygroscopic and heat-sensitive characteristics of this compound.



The process for manufacturing urea involves a combination of several major unit operations as illustrated in the diagram to the right. The shaded section deals with the solids formation, solids cooling, solids screening, solids coating and bagging, and/ or bulk shipping. Urea is commercially produced from ammonia and carbon dioxide and takes place in two reactions. The first reaction (exothermic) of liquid ammonia with dry ice produces an intermediate product called ammonium carbamate. The second reaction (endothermic) produces urea and water



We had designed Silo filling controls, Truck tracking tools & Load cells that detect type of Trucks, measures Tare weight and Gross Weight to calculate the urea material weight being transported Truck wise and regenerates commercial Invoices for the Producer to be forwarded to the process plants like the Petrochemicals in this project.

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