Description of Project

In general, production processes are said to be energy-intensive. Varying quality aspects of input products cause the necessity to alter both processing and refining. The input of energy for compound feed production changes according to the level of refining between 45 and 120 kWh/t.

21.3 million tons per annum of produced compound feed refer to a total energy demand of 1.5 billion kWh per annum. Therefore, our focus is to improve the energy efficiency. An essential condition for this purpose is the prevention of any loss in product quality. Despite that, a higher quality level should be achieved by an improved process control. Furthermore, we focus on tools to increase process safety and, by this, to preserve constant product quality.

Development of an expert system

The whole process chain is influenced very intensively by personal experiences of local manufacturers and their employees. Therefore, it is unavoidable to control this process with high attention and to use measurement values for the regulation of the compound feed production. Because of the complex context between product quality and process management, it is advisable to develop a regulation system which can refer to expert knowledge. The system we want to develop is an expert system which can recognize relations among input, process management and product quality and can furthermore give advice for process regulation in time.

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