

Title: Modelling of Formalin & UFC Production in Absorption Columns

Duration: 01/03/2008 – 30/04/2009

Abstract

The aims of the project were primarily the modelling of the absorption step of the formaldehyde production process via the utilization of the latest know-how on materials, reactions, physical and thermodynamic data libraries, the validation of model predictions using experimental data from the literature and typical absorption columns and finally the investigation of the potential to simulate process conditions at several scales (lab, pilot and industrial scale).

The results showed that in formalin production, the accuracy of the physicochemical equilibriums and reaction rate models used for the simulation in the system developed and used in this project is highly satisfactory. Likewise, the UFC production simulator has enabled the immediate and inexpensive, yet trustworthy, calculation of various conditions for alternative scenarios that can facilitate future optimization of formaldehyde plants.