

Prediction model for residue fluidized catalytic cracking unit using the adaptive predictive partial least squares method

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The adaptive predictive partial least squares(APPLS) method is suggested for sensitive adaptation to process changes and a large scale data of chemical processes. The yield prediction model for residue fluidized catalytic cracking(RFCC) unit is developed by using the APPLS method. RFCC is the most important heavy oil upgrading technology, as the heavy residual oils are converted into lighter, more valuable hydrocarbons. In this study, prediction model of the product yields of RFCC unit for various feed qualities is proposed based on the real-time model updating by the APPLS method. The results of the real-time prediction indicate that the APPLS method would be a useful tool for the yield prediction of RFCC unit.