CATALYTIC HYDROCHLORINATION OF ACETYLENE IN A LIQUID PHASE

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The purpose of the present work is the experimental definition of influence of cations of various chlorides on speed of hydrochlorination reaction of acetylene and study some kinetic laws of the process of joint obtaining vinylchloride and chloroprene And also the laws of changing of activity and selectivity CuCl₂-FeCl₃-ZnCl₂-NH₄Cl-HCl of catalysts in synthesis of vinylchloride and chloroprene from acetylene and hydrogen chloride depending on composition, conditions processing conditions the presence of promoters and connection between catalytic properties, condition and and are investigated.

The catalytic hydrochlorination reaction of acetylene was studied in flowing on gas ingradientless reactor. Liquid and gaseous products of the synthesis have been subjected to gas-chromatographic analysis using the flame ionization defector.

The optimization of the separation process of liquid products of catalytic hydrochlorination of acetylene has been carried out by variation of the nature and content of stationary liquid phase, and also the temperature of column thermostat using as critical parameter the separation degree of neighboring peaks.

On the developed catalyst the temperature influence the ration of regents the concentration of catalysts, the contact time for general conversion of acetylene and output of products of the reaction and also on selectivity of the process were investigated.

On the basis of the obtained data the stage scheme of hydrochlorination of acetylene in presence of investigated catalysts was offered.

Liquid products of catalytic hydrochlorination of acetylene which has been carried out by plan of full-factor experiment have been analyzed. The plan of full-factor experiment included temperature of synthesis, the catalyst composition the of vinilchloride the, speed of acetylene submission as influencing parameters, and as critical - the output of vinilchloride and chloroprene, and the productivity of the catalyst as well. On the basis of gas-chromatographic data, received after the realization of experiment, the regression model of catalytic hydrochlorination of acetylene was composed. Using the lasts the optimal condition of joint obtaining vinilchloride and chloroprene were revealed.