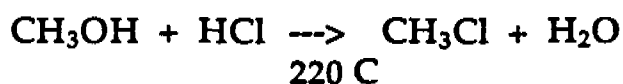


HYDROCHLORINATION REACTIONS

VAPOR PHASE REACTION OVER ACTIVATED ALUMINA

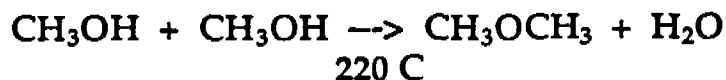
- * 98 % MeOH Conversion
- * 20% XS HCl



(H_r = -11.0 kcal/mol)

SIDE REACTION

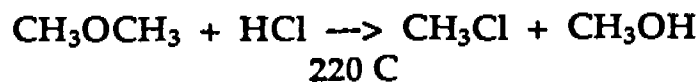
- * Dimethyl ether production



(H_r = -5.9 kcal/mol)

DME CONSUMPTION

- * Cellulose mixture (70% DME, 30% M1)



(H_r = -2.2 kcal/mol)