

ABSTRACT

METHOD FOR PRODUCING METHACROLEIN AND METHACRYLIC ACID

Provided is a method for producing methacrolein and methacrylic acid which can improve yields of methacrolein and methacrylic acid. The method is to produce methacrolein and methacrylic acid through gas-phase contact oxidation of at least one raw material selected from the group consisting of isobutylene, TBA, and MTBE with molecular oxygen in the presence of a catalyst containing molybdenum, bismuth, and iron, using a fixed-bed reactor, in which, when a boundary temperature of activation energy of the oxidation reaction is denoted by T_A ($^{\circ}\text{C}$), the reaction is started at a temperature lower than the reaction temperature T_A ($^{\circ}\text{C}$), the reaction is controlled while increasing a reaction temperature such that a reaction rate of the raw material is kept constant, and the reaction is ended at a reaction temperature exceeding T_A ($^{\circ}\text{C}$), and, when an average of rates of temperature increase until the reaction temperature reaches T_A ($^{\circ}\text{C}$) is denoted by A ($^{\circ}\text{C/hr}$) and an average of rates of temperature increase in the reaction temperature exceeding T_A ($^{\circ}\text{C}$) is denoted by B ($^{\circ}\text{C/hr}$), a ratio (A/B) of A and B is 0.05 to 0.18.