

ABSTRACT

5 Provided is a reactor device in which a fixed bed multi-tubular reactor is used to produce alkenyl acetate through a gas phase catalytic oxidation reaction of a lower olefin, acetic acid, and oxygen, and which enables accurate measurement of the temperature of a catalyst layer in a reaction tube even when a process operation has been carried out for a long time. A fixed bed multi-tubular reactor for producing alkenyl acetate, wherein the fixed bed multi-tubular reactor is equipped with a plurality of reaction tubes to which a raw material gas and a mist of an aqueous solution of an alkali metal acetate are supplied from the upper portion of the fixed bed multi-tubular reactor, a thermometer protection tube inserted into at least one of the plurality of
10 reaction tubes from the lower portion of the fixed bed multi-tubular reactor, and a thermometer inserted into the thermometer protection tube.

Figure 1