ABSTRACT

A plate type catalytic reactor capable of improving reaction performance and extending the service life of the catalyst by controlling efficiently a temperature profile in a catalyst layer, is presented.

A plate type catalytic reactor characterized in that a plurality of pairs of heat transfer plates, each formed of two sheets of corrugated plates joined to each other and each having a plurality of heat transfer medium flow passages, are arranged so that projected surface parts and recessed surface parts of the corrugated plates of adjacent heat transfer plates are opposed to each other to form a catalyst layer, wherein a circular or elliptic arc shape formed in the corrugated palates may be changed to increase the thickness of the catalyst layer from the inlet toward the outlet for a starting material gas fed to the catalyst layer.