

[ABSTRACT]

A production method of one or both of (meth)acrolein and (meth)acrylic acid using a heat-exchange-type reaction vessel having a reaction tube at an inner part is provided, the method including causing an oxidation reaction of a raw material supplied to the reaction tube while circulating a heat medium to an outer side of the reaction tube to produce one or both of (meth)acrolein and (meth)acrylic acid, in which the reaction tube has i layers, which are a plurality of catalyst layers having different catalyst charging amounts per unit volume, in a longitudinal direction of the reaction tube, provided that i is an integer of 2 or more, and the oxidation reaction satisfies Expression (1).

$$\xi \leq 0.275 \text{ (mol} \cdot \text{K} \cdot \text{h}^{-1} \cdot \text{W}^{-1}) \quad (1)$$

Provided that (AAA) is satisfied.

$$\xi = F \times \left(m_1 / \sum_{j=1}^i m_j \right) / (U \times A) \cdots (*) \quad (\text{AAA})$$

No figure.