

ABSTRACT

OXIDATION PROCESS FOR THE PRODUCTION OF ALKENES AND CARBOXYLIC ACIDS

A process for the oxidation of a C₂ to C₄ alkane to produce the corresponding alkene and carboxylic acid which process comprises contacting in an oxidation reaction zone, said alkane, molecular oxygen-containing gas, and optionally, at least one of the corresponding alkene and water, in the presence of at least two catalysts each active, with different selectivities, for the oxidation of the alkane to the corresponding alkene and carboxylic acid, to produce a product stream comprising said alkene, carboxylic acid and water, and in which process the molar ratio of alkene to carboxylic acid produced in said oxidation reaction zone is adjusted or maintained at a pre-determined value by controlling the relative proportions of the at least two catalysts in said oxidation reaction zone. Such an oxidation process may be used in an integrated process, such as for the manufacture of ethyl acetate or vinyl acetate.

Sole figure