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ACTION

(54) Title: A PROCESS AND SYSTEMS FOR THE EPOXIDATION OF AN OLEFIN

(57) Abstract: A process for the epoxidation of an olefin, which process comprises reacting a feed comprising the olefin, oxygen and a reaction modifier in the presence of a highly selective silver-based catalyst at a reaction temperature T, and with the reaction modifier being present in a relative quantity Q which is the ratio of an effective molar quantity of active species of the reaction modifier present in the feed to an effective molar quantity of hydrocarbons present in the feed, and which process comprises the steps of: operating at a first operating phase wherein the value of T is T_1 and the value of Q is Q_1, and subsequently operating at a second operating phase at a reaction temperature which is different from the reaction temperature employed in the first operating phase, such that the value of T is T_2 and the value of Q is Q_2, whereby Q_2 is determined by calculation and Q_2 is defined by the formula $Q_2 = Q_1 + B (T_2 - T_1)$, wherein B denotes a constant factor which is greater than 0; a reaction system suitable for performing the process for the epoxidation of an olefin; a computer program product which comprises a computer readable program recorded on a computer readable medium, suitable for instructing a data processing system of a computer system to execute calculations for the process for the epoxidation of an olefin; and a computer system which comprises the computer program product and a data processing system.

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