

ABSTRACT

PROCESS FOR PRODUCING ACETIC ACID

A process for producing acetic acid comprises a process comprising: (1) carbonylating methanol; (2) separating the reaction mixture into a volatile phase and a less-volatile phase; (3) distilling the volatile phase to form a first overhead rich in a lower boiling component, and an acetic acid stream rich in acetic acid; and at least one step group selected from the group consisting of the following sections (4), (9), and (15): (4) a section for separating impurities from the acetic acid stream to give purified acetic acid, (9) a section for separating the first overhead into a stream rich in acetaldehyde and a stream rich in methyl iodide, and (15) a section for absorption-treating an off-gas from the process with an absorption solvent and forming a carbon monoxide-rich stream and an acetic acid-rich stream. In this process, the concentration of oxygen in a gaseous phase of the process is controlled to less than 7% by volume and/or the concentration of oxygen in a liquid phase of the process is controlled to less than 7×10^{-5} g/g, and the formation of iodine is reduced. The process effectively reduces or prevents local corrosion of an inner wall of a process unit and/or line.

Figure 1