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(54) Title: PROCESS FOR PRODUCING VINYL ACETATE MONOMER

(57) Abstract: A process for producing vinyl acetate monomer comprises feeding a reactor an inlet stream comprising ethylene, acetic acid, oxygen, and carbon dioxide. The ethylene, acetic acid, and oxygen are reacted in the presence of a palladium containing catalyst to produce a product stream comprising vinyl acetate monomer, ethylene, acetic acid, water, and carbon dioxide. The product stream is passed through a flash separator to provide a vapor stream comprising carbon dioxide and ethylene and a liquid stream comprising acetic acid and vinyl acetate monomer. At least a portion of the vapor stream is recycled to the inlet stream feeding the reactor so that the amount of carbon dioxide entering the reactor in the inlet stream ranges from greater than 5 mol% to 20 mol% based on the total amount of ethylene, acetic acid, oxygen, and carbon dioxide entering the reactor. The vinyl acetate monomer is recovered from the liquid stream.



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