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(54) Title: PROCESS FOR SEPARATING PRODUCT GAS USING CARBONYLATION PROCESSES

(57) Abstract: The present invention is related to separating product gas using a carbonylation reactor in which the carbon monoxide is consumed to produce acetic acid, and hydrogen and carbon dioxide are recovered. The recovered hydrogen may be further purified to reduce the concentration of carbon oxides. The present invention provides improved methods for converting product gas or syngas to ethanol.

