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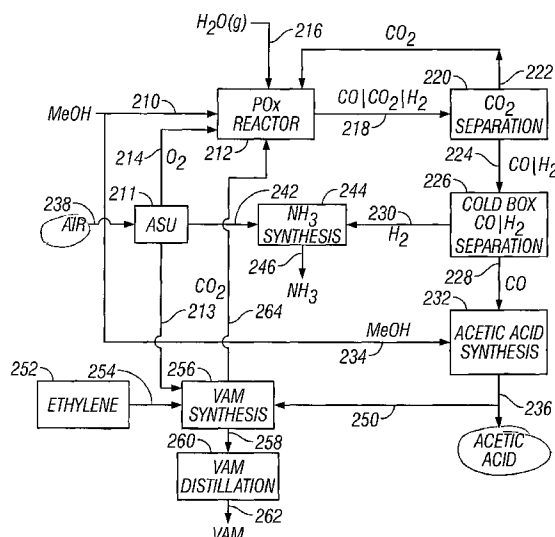
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(54) **Title:** PREPARATION OF SYNGAS FOR ACETIC ACID SYNTHESIS BY PARTIAL OXIDATION OF METHANOL FEEDSTOCK



(57) **Abstract:** A method for the production of syngas from methanol feedstock is disclosed. The methanol feed (110) is supplied to a partial oxidation reactor (112) with oxygen (114) and optionally steam (116) to yield a mixed stream (118) of hydrogen, carbon monoxide, and carbon dioxide. The carbon dioxide (122) is separated out and the hydrogen and carbon monoxide mixture (124) is fed to a cold box (126) where it is separated into hydrogen-rich and carbon monoxide-rich streams (130, 128). The separated carbon dioxide (122) can be recycled back to the partial oxidation reactor (112) as a temperature moderator if desired. The carbon monoxide-rich stream (128) can be reacted with methanol (134) in an acetic acid synthesis unit (132) by a conventional process to produce acetic acid (136) or an acetic acid precursor. Optionally, an ammonia synthesis unit (144) and/or vinyl acetate monomer synthesis unit (156) can be integrated into the plant.