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[Continued on next page]

- (54) Title:** PUMP AROUND REACTOR FOR PRODUCTION OF ACETIC ACID

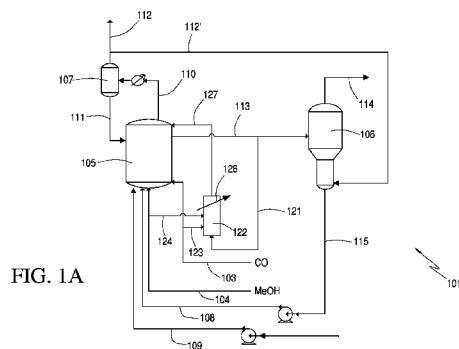


FIG. 1A

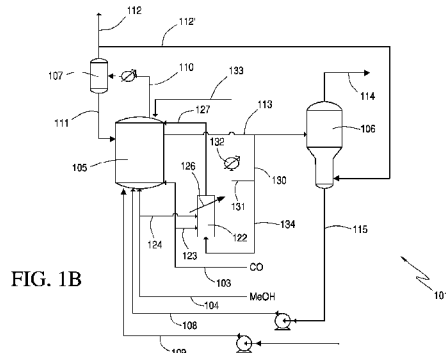


FIG. 1B

- (57) Abstract:** The present invention relates to improved processes for the manufacture of acetic acid. A pump around reactor is used to produce additional heat for the production of steam. The pump around reactor receives a portion of the reaction solution produced by the carbonylation reactor and further reacts that portion with additional carbon monoxide and/or reactants.



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