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(54) Title: PROCESS FOR PRODUCTION OF ACETIC ACID AND ACRYLIC ACID FROM WASTE CARBON CONTAINING MATERIALS WITH REDUCED CARBON FOOTPRINT

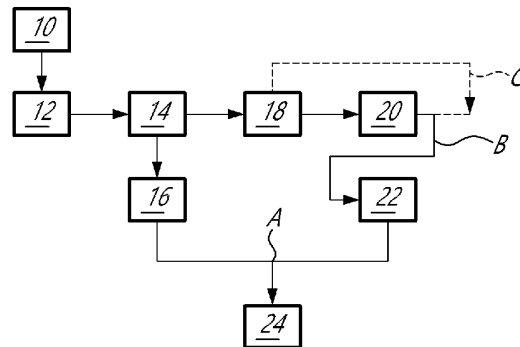


Fig. 1

(57) Abstract: It is provided a process of converting syngas resulting from the gasification of a carbonaceous material into acetic acid and acrylic acid comprising converting the syngas into methanol and separating the methanol into a first and second stream, carbonylation of the first stream of methanol producing methyl acetate, hydrolyzing the methyl acetate to obtain acetic acid, oxidizing the second stream of the methanol into formaldehyde in a gas phase reaction, and reacting by aldol condensation the formaldehyde and acetic acid to produce acrylic acid. Particularly, the first stream of methanol is dehydrated to produce dimethyl ether (DME) and the DME is further contacted with syngas under an iodide-free environment to produce the methyl acetate by carbonylation, and subsequently acetic acid using a reactive distillation column.

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