

PROCESS FOR THE PRODUCTION OF TEREPHTHALIC ACIDABSTRACT OF THE DISCLOSURE

Terephthalic acid is produced by reacting paraxylene with oxygen in a reactor having several vertical stages, the reaction taking place in the liquid phase using acetic acid as solvent and a cobalt-manganese-bromine complex catalyst. During the reaction, a carbon dioxide-containing gas phase is withdrawn from the vapor space of the reactor. The gas phase is cooled to condense vaporized acetic acid therefrom and carbon dioxide is separated from the gas phase and recycled to the vapor space or to the liquid phase or to both of these. In an alternate embodiment, the gas remaining after condensing acetic acid is subjected to catalytic oxidation to oxidize carbon monoxide and methane, if present, to carbon dioxide, and some or all of the carbon dioxide is recycled to the reactor.

Fig. 1

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