

Title (en)

METHOD AND DEVICE FOR PRODUCTION OF A HOMOGENEOUS MIXTURE OF A VAPOUR-FORMING AROMATIC HYDROCARBON AND AN OXYGEN-CONTAINING GAS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR ERZEUGUNG EINES HOMOGENEN GEMISCHES AUS EINEM DAMPFÖRMIGEN AROMATISCHEN KOHLENWASSERSTOFF UND EINEM SAUERSTOFF ENTHALTENDEN GAS

Title (fr)

PROCEDE ET DISPOSITIF POUR PRODUIRE UN MELANGE HOMOGENE CONSTITUE D'UN HYDROCARBURE AROMATIQUE A L'ETAT DE VAPEUR ET D'UN GAZ CONTENANT DE L'OXYGENE

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Application

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Abstract (en)

[origin: US2003013931A1] A process and an apparatus for producing a homogeneous mixture of a gaseous aromatic hydrocarbon and an oxygen-containing gas for catalytic gas-phase reactions, in particular a homogeneous mixture of gaseous o-xylene and/or naphthalene and air for preparing phthalic anhydride, are provided. The liquid aromatic hydrocarbon is atomized to form droplets having a diameter of less than 1 mm and injected into an oxygen-containing gas stream (12) preheated to above the boiling point of the aromatic hydrocarbon. According to the invention, the liquid aromatic hydrocarbon is atomized by means of nozzles (15) which form a hollow cone (16), preferably by means of swirl nozzles. The o-xylene/air mixture is advantageously produced in a chamber which is bounded by side walls (18) heated to above the boiling point of the hydrocarbon.

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