

Title (en)

METHOD FOR PROCESSING INDUSTRIAL AND DOMESTIC WASTES

Title (de)

VERFAHREN ZUR VERARBEITUNG VON INDUSTRIE- UND HAUSHALTSABFÄLLEN

Title (fr)

PROCÉDÉ DE TRANSFORMATION DE DÉCHETS INDUSTRIELS OU MÉNAGERS ET INSTALLATION DESTINÉE À SA MISE EN OEUVRE

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Application

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Abstract (en)

The invention relates to chemical technology and equipment, in particular, to methods and apparatuses for pyrolysis (gasification) in molten salts and/or alkalis of organic household and industrial waste. The task of the invention is to increase quality and quantity of obtainable pyrolysis gas. Set task is achieved by formation of gas-tight plug from compressed waste in the supply channel. From outside of loading channel a layer of products of low-temperature waste processing is formed, at that along the loading channel temperature regime in the range from 20 to 550 °C is formed. Temperature regulation in the loading channel is carried out by dosed supply of water vapor and/or carbon dioxide into product layer of low-temperature processing waste. Metals, oxides, salts or oxide hydrates thereof are added to waste as processing catalysts. Water vapor and/or carbon dioxide are supplied into the area of high-temperature processing. Silicon dioxide is added to waste for melt regeneration. The pipe of the waste loading device in the apparatus is equipped with the cooler for method implementation. The reactor pipe, damper chamber and shell of operating area are located coaxially with the pipe of loading device in the apparatus. The blades, providing melt twisting and dispersion of gaseous products in melts, are installed in the operating area of the device. The heating tubes are located in the area between the operating area shell and vessel. The apparatus is equipped with the displacing device for slug discharge. Proposed method and device allow to obtain optimal gas composition for its further use in production of electric power or for synthesis of, for example, alternative engine oil. At that oxygen or air are not used and harmful and atmospheric emission are practically absent.

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