Variation of toxic pollutants emission during a feeding cycle from an updraft fixed bed gasifier for disposing rural solid waste

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Variation of toxic pollutants emission during a feeding cycle from an updraft fixed bed gasifier for disposing rural solid waste☆

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Abstract: The variation of toxic pollutants emission during a feeding cycle was examined by field monitoring from a batch feeding updraft fixed bed gasifier for disposing rural domestic solid waste. Results showed that the content of oxygen in flue gas gradually increased, while SO_2 and HCl in flue gas decreased with time after feeding in a whole feeding cycle. Although large amount of CO was produced during the gasifying, low CO content in flue gas could be obtained after the heat treatment with an electric heating device. The distribution characteristics of dioxin congeners in flue gas indicted the re-synthesis of dioxins after flue gas heating, and the increase of oxygen promoted the synthesis of dioxins. The emission content of dioxins could meet the standard (0.1 ng I-TEQ·m^{-3}, GB18458-2014) of China when the oxygen content was controlled

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