

能源和环境工程

垃圾焚烧飞灰熔融过程二口恶英分解特性

李润东, 聂永丰, 李爱民, 王雷, 池涌, 岑可法

沈阳航空工业学院清洁能源与环境工程研究所, 辽宁 沈阳 110034;清华大学环境科学与工程系, 北京 100084;浙江大学热能工程研究所, 浙江 杭州 310027

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摘要

关键词 [二口恶英](#) [熔融](#) [飞灰](#) [城市垃圾](#)

分类号

DECOMPOSITION CHARACTERISTICS OF PCDD/Fs DURING MELTING PROCESS OF MUNICIPAL SOLID WASTE INCINERATOR FLY ASH

LI Rundong, NIE Yongfeng, LI Aimin, WANG Lei, CHI Yong, CEN Kefa

Abstract

Characteristics of PCDD/Fs during the melting process of municipal solid waste incinerator fly ash were investigated by lab-scale experiments. Two kinds of fly ash samples, obtained from fixed-bed and fluidized-bed incinerators respectively, were used. The experiments were performed at various temperatures, two kinds of atmosphere (O_2 and N_2) and different residence times, and the DRE(decomposition and removal efficiency) of PCDD/Fs contained in fly ash was studied. The result revealed that approximately 99.96% dioxins were decomposed by melting under experimental condition, and the concentration of dioxins in exhaust gas of melting furnace was below the detection limit. There was an increase in temperature from $1100^\circ C$ to $1460^\circ C$ resulting in an increase of DRE of dioxins in fly ash from 99.968% to 100% in an oxidative melting atmosphere. The DRE of dioxins in the oxidative atmosphere is higher than that in inert atmosphere. The results will be helpful not only to studying the mechanism of dioxin decomposition in the melting process but also to evaluating the effect of pollution control.

Key words [dioxins](#) [melting](#) [fly ash](#) [municipal solid waste](#)

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通讯作者 李润东 leerd@mail.tsinghua.edu.cn

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