

### Pyrolysis of solid refuse fuel in bubbling fluidized bed reactor: effect of bed temperature

Tokmurzin Diyar, 라호원, 윤상준, 문태영, 문지홍, 윤성민,

박성진, 김재호, 이재구, 서명원<sup>†</sup>

한국에너지기술연구원

(mwseo82@kier.re.kr<sup>†</sup>)

Reduction of emissions from anthropogenic activities and especially from waste disposal holds immense importance. One of the viable ways to utilize non-recyclable waste materials is fast pyrolysis of solid refuse fuel (SRF). At the same time pyrolysis is a step preceding gasification therefore it is of special interest for studies of SRF gasification process. This study investigates the effect of bed temperature on SRF pyrolysis in bubbling fluidized bed (BFB). The experiments were conducted with inert fluidizing agent in an externally heated BFB reactor, at the temperature range between 600 and 900°C. BFB had internal diameter of 0.114 m and height of 1 m. Pyrolysis process products were collected, and mass balance was determined. Gas composition was continuously monitored using IR gas analyzer and additionally analyzed with GC technique. Tar samples were collected and analyzed. Char samples were collected from the cyclone and characterized using TGA.