

A Study on the emission characteristics of GHGs according to waste characteristics (Fluidized bed incinerating facility)

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Abstract

The IPCC recommends the use of emission factor to apply decision tree. To improve the reliability of the national greenhouse gas inventory, accuracy of emission factors is important. Most advanced countries apply national emission factor to major emission sources. The development and application of national emission factor is necessary, to increase accuracy of domestic greenhouse gas emissions.

In this study, the characteristics of GHGs studied and emission factors calculated in industrial waste incinerating facility (Waste Paper, Wood industry) (Fluidized bed). Using the NDIR, which is a continuous measurement, 4 incineration facilities were measured about 2~3 months.

As a result, 1. In paper industry, the average concentration of CH₄ is 0.79~2.08 ppm and emission factor is calculated 0~3.52 gCH₄/ton-waste. The average concentration of N₂O is 4.05~5.18 ppm.

And emission factor is calculated 23.41~30.71 gN₂O/ton-waste. 2. In wood industry, the average concentration of CH₄ is 0.74~1.86 ppm and emission factor is calculated 0.00 gCH₄/ton-waste. The average concentration of N₂O is 6.13~15.63 ppm. And emission factor is calculated 153.6 ~ 254.0 gN₂O/ton-waste.

We know that CH₄ has a similar concentration of GHGs according to waste characteristics. But N₂O was found to have higher concentration characteristics in wood than paper industry.