

Lech-Brzyk, K. Emission of Selected Pollutants from Biomass Combustion in 2–4 MW Boilers. *Ochrona Srodowiska* 2014, Vol. 36, No. 2, pp. 47–52.

Abstract: Flue gas emissions were investigated from four industrial boilers intended for combustion of continuously fed biomass (cut straw, chips, sawdust or wooden shavings). Pollutant emission was estimated on the basis of PAH but also dust, soot and TOC concentrations in flue gases. Also, pollution indicators were analyzed in reference to 1 MJ of heat fuel input. PAH emission index ranged from 0.7 $\mu\text{g}/\text{MJ}$ to 28.4 $\mu\text{g}/\text{MJ}$, while CO content in flue gases ranged from 0.13 to 0.956 g/MJ. Individual PAH content in the flue gases ranged from 0.005 $\mu\text{g}/\text{m}^3$ to 33.362 $\mu\text{g}/\text{m}^3$ at CO concentrations between 460 and 1358 mg/m^3 and NO_x ranging from 155 to 398 mg/m^3 , under normal conditions and with 6% O_2 content. PAH emission indexes determined were lower than the literature values (for low power boilers).

Keywords: Industrial power boilers, flue gases, air pollution, PAH emission.