INCINERATION BOTTOM ASH UTILIZATION IN THE CZECH REPUBLIC: CURRENT SITUATION AND PERSPECTIVES

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Waste-to-energy (WtE) has recently become a key technology for mixed municipal solid waste (MSW) treatment in Europe. Waste-to-energy plants treat nearly 80 million tons of MSW yearly and produce approximately 20 million tons of incineration bottom ash (IBA). In the Czech Republic, there are four WtE plants that annually treat about 0.7 mil. ton of waste; it means incineration bottom ash (IBA) production nearly 0.2 mil. ton. Recent development and trends change the approach to IBA, it is no longer regarded as unwanted waste from WtE plant but can be considered a valuable secondary source for several materials like ferrous and non-ferrous metals. Mineral matrix after metal separation can be used in various application in construction industry.

IBA in the Czech Republic contains 6-11 % of ferrous scrap and 1.3-2.8 % of non-ferrous scrap, that means overall potential for recovery 13-14 kt of ferrous scrap and 3.0-3.5 kt of non-ferrous metals per year. Due to absence of technologies for non-ferrous metals recovery in the Czech Republic, the potential is exploited only from minor part, ferrous metals recovery is 11 kt and non-ferrous metal recovery 0.5 kt per year, it means huge loss of valuable secondary sources. Utilization of mineral matrix of IBA is currently prohibited in the Czech Republic due to strict limits for waste utilization on the soil surface and absence of other legal framework for waste utilization in selected defined applications such as sub-base layer in road construction.

However, there are intensive efforts to change the situation and implement up-to-date approach for IBA treatment, i.e. to implement advanced technologies for metal recovery and to elaborate technical and environmental criteria that allows IBA utilization in road construction. The paper will summarize recent activities and will also outline future perspectives also in according with valid waste management plan.