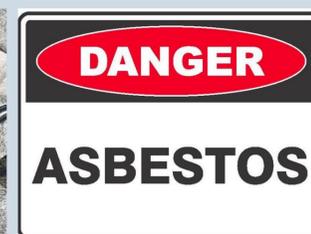


Thermal treatment is one of the proposed methods for end-of-life cement-asbestos wastes neutralisation

There are differences between thermal decomposition course of cement-asbestos samples from different countries

This influence on the creation of new mineral phases



Introduction

Asbestos minerals were one of the most popular and cheapest raw materials used in the construction industry in the past, when they were primarily used of cement-asbestos composite material.

Nowadays we know that asbestos possesses carcinogenic properties. Due to this fact asbestos was banned in many countries, also in Poland as well as Lithuania. All asbestos-containing materials are considered dangerous wastes and stored in special landfills, which causes significant environmental pollution.

One of the proposed methods to solve the asbestos problem may be thermal treatment.

Experimental

Four asbestos-containing wastes from both countries in the form of cement-asbestos materials were examined and compared using methods:

- chemical analysis (XRF)
- phase analysis by X-ray diffraction (XRD)
- differential thermal analysis (DTA)
- thermogravimetric measurements (TG/DTG)
- high-temperature microscope
- FactSage calculations

Conclusions

The studies have shown a significant difference in the behavior of the tested cement-asbestos materials from different countries under high-temperature conditions, which may affect the prospects for reusing neutralized asbestos waste.

Results

