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FLY ASH FROM THERMAL POWER PLANT, RAW MATERIAL FOR GLASS-CERAMIC

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Abstract

Waste recycling represents a very significant issue for the protection of our environment. Large waste quantities (slag and ashes) are products of the coal extraction industry and its subsequent combustion in thermal power stations. The possibilities of obtaining crystallized glasses in the CaO-Al_2O_3-Fe_2O_3-SiO_2 system by introducing in the raw materials mixture ashes from Mintia Deva thermal power station have been studied. The physical and chemical characterization of the thermal power station ash has been performed. Crystallized glass samples have been obtained and characterized by thermal analysis, electronic microscopy and X-ray diffraction.
Key words: fly ash, glass-ceramics, thermo-differential analysis, electronic microscopy, X-ray diffraction

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