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## **WPLYW DODATKU PYŁU Z PIECA CEMENTOWEGO (CKD) W PROCESIE PRODUKCJI CEMENTU NA JEGO WŁAŚCIWOŚCI**

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## **THE INFLUENCE OF CEMENT KILN DUST (CKD) ADDITION IN THE CEMENT PRODUCTION PROCESS ON THEIR PROPERTIES**

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Słowa kluczowe: cement, CKD, pył cementowy, produkcja cementu

Keywords: cement, CKD, cement kiln dust, production of cement

In modern world the usage of cement increases more and more every year due to the development of building industry. Scientists provide investigations on using waste materials in the production of cement, which allows not only to modify the properties of cements, but also to decrease the costs of production.

One of the waste material using in the cement industry is Cement Kiln Dust (CKD). Because of the large amounts of CKD being produced in the cement production process, the companies lead to putting it back to the production as an addition.

In this thesis the influence of CKD addition on properties of portland and slag cements was investigated; the addition of 0.7 and 1.7% of CKD were used. The chemical analysis of cement binders was carried out. The normal consistency, the initial setting time, the heat of hydration and the compressive strength were tested and the microstructure of samples was also observed. The results of the analysis showed that the addition of cement kiln dust up to 1.7% does not significantly affect the performance of the cement. The cements produced complied with the standard requirements and their class did not change. The conclusion is that CKD can be used as a secondary additive for cement.