

EVALUATION OF RECIRCULATING LOAD OF FINE PARTICLES DURING THE CEMENT ASBESTO FIBER COMPOSITES PRODUCTION: A CASE STUDY

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ABSTRACT

One of the difficulties observed in the Hatschek process is to estimate the true composition of the fiber cement sheets produced. In this closed system, the batches with new raw materials, which have a controlled composition, is diluted with process water which contains fine particles lost by the filtration process in the vats. The concentration of these fines in process water varies over time. The amount of process water added to dilute the new batches is also changed in real time by a close-loop system in order to control fresh mat thickness. Consequently this dilution changes the initial materials proportion and can affect the amount of anhydrous cement, particle size distribution and packing, consequently, modify the fresh and hardened properties.

Nevertheless, there is no published data on these subjects. The paper presents preliminary results of a field study one Hatschek machine analyzing the content and characterization of these fines.

KEYWORDS

Hatschek process, product composition, vat retention