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(54) Title: PROCESS AND APPARATUS FOR TREATING EXHAUSTED ABRASIVE SLURRIES FOR THE RECOVERY OF THEIR REUSABLE COMPONENTS

(57) Abstract: Process for completely recovering the reusable components of an abrasive slurry used in slicing crystalline materials of silicon, quartz or ceramics when it becomes exhausted and enriched with undesired waste matter. The process consists of an initial centrifuge separation of the exhausted slurry as such and of a wet size-sorting treatment of the fraction containing the abrasive grains obtained from the centrifuge, carried out in a battery of hydrocyclones or centrifuges connected in series. The section for the recovery and purification of the abrasive grains comprises a multifunctional apparatus that performs all the required operations within a single pressure vessel. The process enables the complete recovery of the reusable abrasive grains contained in the exhausted slurry as well as of the suspending or cutting liquid of the abrasive slurry, in order to reuse both components in the manufacturing process. The invention also concerns an apparatus for carrying out the treatment of exhausted abrasive slurries according to the process described.



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