

The influence of various retanning agent and stuffing agent on properties of paper made by the collagen fiber mixed with plant fiber

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Abstract: comprehensive utilization of leather solid waste was not only changing waste into valuable and reducing waste, but also reducing environmental pollution. The collagen fiber was mixed with plant fiber for papermaking. With the increase of addition collagen fibers, a number of performance indexes decreased in paper. The influence of various retanning agents and stuffing agents on properties of paper, which was made by the collagen fibers mixed with plant fiber, were studied. The mixed performance of paper fiber was determined and contrasted by microscope, SEM and other detecting instruments. The results showed that the retanning agents can improve the tensile and tear strength index of paper, of which vegetable tanning agents have the best performance. The properties of paper retanned by vegetable tanning agents were good, and the paper was biodegradable. And the folding performance of the paper could be significantly improved with a small amount of stuffing agent.

Key words: retanning agent; Stuffing agent; collagen; plant fibre