

Methods for the production of cellulose pulp

Mechanical pulping

In the mechanical pulping processes, fibers are separated from one another by mechanical energy applied to the wood matrix causing the bonds between fibers to break gradually and fiber bundles, single fibers and fiber fragments to be released. It is the mixture of fibers and fiber fragments that gives mechanical pulp its favorable printing properties.

Chemical (Kraft) pulping

In the chemical pulping processes, the fibers are liberated from the wood matrix as the lignin is removed by dissolving it into the cooking chemical solution at a high temperature. Two chemical pulping methods exist using sodium sulfate (kraft) and sodium sulfite. Today, the kraft process is the dominating chemical pulping process worldwide due to the superior pulp strength properties compared with the sulfite process, its application to all wood species, as well as to the efficient chemical recovery systems that have been developed and implemented.

Source: "Best Available Techniques (BAT) Reference Document for the Production of Pulp, Paper and Board," pp. 195, 369, 487.



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