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Pulp and Paper Processing

Application of enzymes in the pulp and paper industry

Waste paper-enhancing enzyme: Waste paper-enhancing enzyme is a biological protein that is genetically modified and deeply fermented. It can break the primary wall of secondary fibers and improve fiber binding capacity. Because it is a biological product, it is degradable, and the wastewater produced in the production can be completely reused after aerobic biological treatment. Therefore, the use of enzymes in the paper industry can not only improve the paper forming performance, but also reduce the production cost. It is also conducive to protecting the ecological environment.

Water filtration enzyme: The use of water filtration enzyme to treat OCC waste paper pulp can effectively reduce the
degree of beating, increase the opening of the lip, improve the water filtration of the slurry, reduce the moisture in the outlet, and reduce the usage of retention and drainage aids and sizing agents, lowering production costs.

Beating enzyme: By decomposing the inside of the fiber, it promotes the splitting and deuteration of the fiber during the refining process, making the beating easier and saving the energy consumption of beating.

By modifying the surface of the fiber, the fiber ends are differentiated to promote the swelling of the fiber, and at the same time, the hydroxyl and carboxyl groups on the surface and the end of the fiber are increased, thereby enhancing the bonding force between the fibers, to increase the paper forming performance and improve the effect of quality for paper formation.

Through the modification of the fiber by the biological enzyme, the fiber morphology has obvious beneficial changes. Whether it is before or after grinding, the fiber surface has more obvious filamentization, so the degree of enthalpy of the slurry is more easily improved. and the fine fibrillation of the surface helps to improve the physical properties of the paper and improve the retention rate. The bonding between the fibers is stronger when the paper is formed.