

熱化學轉化澱粉塗佈應用實務

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The Practical Application of Thermo-modified Starch in Coating

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Summary

Starch is a natural product, which has been used in papermaking extensively due to its accessibility, low price and stable supply. Despite of the intimate relation between the papermaking technologies and starch application, diversity of its sources and chemical structural characteristics, such as; unstable viscosity, and retrogradation, really distress a lot of users and limited its application. All the limitations of starch characteristics have been much improved through different chemical methods, due to the progress in chemical industry. This article discusses mainly one of the starches, the thermo chemically modified starch, including the control of its cooking, storage and applications.

一、緒言

澱粉是一種被廣泛應用在造紙界的天然產物，推究其原因主要是其取得容易、價格便宜且來源穩定的優點。因此在造紙界，澱粉之應用一直有密不可分的關係，但因澱粉來源複雜且本身化學結構上的特性，一些先天上的缺點，一如黏度之不易控制及澱粉之老化現象等，使得澱粉在應用上受到許多的限制，困擾了許多造紙界的使用者，但隨著化學工業的進步，澱粉經由各種化學方法之變性處理，使得澱粉本身性質上的缺失改善了許多。也隨著澱粉本身性質的改善，經由變性後之澱粉被廣泛應用在各種不同場合及用途。本文主要討論的就是其中之熱/化學轉化澱粉，包括蒸煮、儲存及使用之控制。