

MAKING PAPER FROM STONE

INNOVATIVE GREEN PRODUCTION TECHNOLOGY FROM CHINA

By Xi Fang

The current paper production still depends much on the exploitation of wood material, which contributes to the phenomenon of deforestation and degrading our living environment. A company in China, however, developed a revolutionary paper material made of ore powder and non-toxic resin, colloquially called stone paper.

The Jiuding Environmental Paper Co. Ltd was founded in 2009 with its headquarter in Shanghai and a 70,000 m² factory area in the beautiful Buddhist shrine under the Jiu Hua Mountain. Collaborating with Chinese universities, the company has achieved the invention and development of technologies related to the production of paper based on stone. The first phase of stone paper uses mainly calcite stone as the raw material, cutting it into particles and blending it with other 10 materials.

Similar to non-wood paper, the Jiuding Company is developing non-wood plank, as well, using calcium carbonate as key material.

The unique technology of the Company allows a production of paper without wood, rather, with educing calcium carbonate (CaCO₃) as the main raw material, together with other non-toxic excipients, through the physical method of synthesis, which reduces significantly the dependence of current paper production industry on wood and contributing to the protection of environment.

Moreover, the general cost of stone paper is even lower than normal paper, and stone paper is water-proof, flexible and invulnerable in terms of physical characters. The material of rich mineral paper keeps sufficient supply and stable cost. According to the data of the company, replacing 1 ton of wood paper with stone paper, it is possible to prevent 20 trees from being cut down, saving 7480 gallons of water and 6 million BTU energy, avoiding 167 lbs solid waste, 42 lbs waste water and 236 lbs atmospheric emissions.

The stone paper can be widely used in all kinds of applications, from paper for printing, map, notebook, posters, to paper for food package, lunch box, heavy packing, and wallpaper, thanks to its characteristics of being washable, water-proof, anti-moth, anti-mildew, resistant and stable in color.

The Company has overcome the first phase of depending on calcite stones and now is capable to use a wide range of stones for the production of green paper and they are



studying on the paper production based on sands, which would allow a more efficient and long-lasting production.

The factory has an annual production capacity of 60,000 tons of wooden-free environmental-friendly paper, the techniques have been highly praised and recognized by the Development and Reform Commission of China, the Government of the Province of Na Hui and accepted into Anhui's 861 Investment Project. This innovative technology has been presented at Expo 2010 and Expo Milano 2015, in the KIP Pavilion, winning countless acknowledgement and compliments.

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