

WAYS TO DEVELOP A "HIGH- PERFORMANCE BAMBOO PROFILE"

Bamboo-based rosewood is chosen as an alternative to wood for its environmentally-friendly features. This spring, WENDY WEI visits Yibin Fuguicheng and speak with General Manager, Mr Chen Jin, to get acquainted with the legend of turning bamboo into rosewood.

YIBIN FUGUICHENG FORESTRY DEVELOPMENT (also referred to as "Yibin Fuguicheng") is a private sci-tech enterprise of agricultural demonstration that specialises in scientific cultivation and development of bamboo base, processing of bamboo of all kinds, and operation and sales of various bamboo products and furniture.

HARMONIOUS COEXISTENCE OF DEVELOPMENT AND NATURE

Exquisite carving, sophisticated technology and profound connotation... these are features of traditional rosewood furniture. However, the traditional valuable timbers for manufacturing rosewood furniture are increasingly rare and even threatened with extinction. China's demand for rosewood resources in recent years has been largely relying on imports, drawing more and more attention from international environmental protection organisations due to the huge demand. And the rosewood resource in other countries is also depleting rapidly. The supply of raw materials in India, Southeast Asia and the South Seas are also on the decrease. So countries governments wisely adopt protection measures; some countries have even banned the export of valuable timbers.



Mr Chen Jin, General Manager of Yibin Fuguicheng Forestry Development

At present, there is still a certain quantity of production of rosewood in South America and Africa, in spite of lower quality compared to traditional rosewood and ever-rising costs. Generally, natural rosewood resource is non-renewable, while the marketing demand for rosewood furniture – as one of the embodiments of Chinese traditional culture – is nearly infinite. The sustainable development of the rosewood furniture industry, due to the gradual scarcity or even exhaustion of the rosewood resource, will get more and more impeded. At this moment, it is a general trend to find an alternative to rosewood.

The Chinese famous poet Su Dongpo wrote in his poem in the Song Dynasty: "I would rather eat no meat, but cannot live without bamboo". Bamboo has ever since the ancient times been a species inseparable in people's life. The "Bamboo Sea" in Changning County of Sichuan Province is a 4A-level scenic area in China, and is reputed as "China's home of bamboo". Founded in 2008, Yibin Fuguicheng specialises in the development and processing of "high-performance bamboo profile" by utilising the abundant local bamboo resource.

"The tenacity of bamboo profiles is six times higher than that of steel," said the general manager of Yibin Fuguicheng in excitement when talking about the product's advantages, "it also defeats common timbers in a high degree in terms of fire prevention." Due to low ignition temperature, a home furnished with bamboo furniture will likely face fire attacks. Even if a fire should break-out, due to the high-density of bamboo, people will have at least half-an-hour to one hour to escape.

Bamboo is one of the fastest-growing plants in the world. To make this fast-growing and resourceful species into more valuable furniture is to, on one hand, turn waste into wealth; on the other hand, to save the scarce resource – rosewood. Wood usually gives rise to a lot of waste materials when cut and processed, while bamboo processing is followed by very little waste. In addition, compared to high-end rosewood products, the rosewood-imitating furniture made of bamboo profiles boasts more friendly prices, beautiful appearance, long service life and better acceptance by consumers.

GREEN TECHNOLOGY LEADS THE TREND

It has become a new trend to process bamboo into square-edged materials or incorporate it into the Chinese antique furniture. However, as bamboo profiles are featured with great density and strong tenacity, common domestic band saws, with thick saw line, call for hard efforts to saw off bamboo profiles and also cause large waste of the material. At the moment of running out of options, Mr Chen came to know DSB Singlehead produced by the Austrian company Wintersteiger in an exhibition (pictured on page 42). It immediately drew his attention due to the advantages such as the unique head design, advanced and creative high-precision sawing system, high cost performance, high-speed and high volume recovery. Without delay,

High Quality

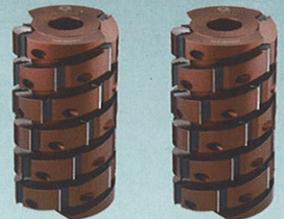
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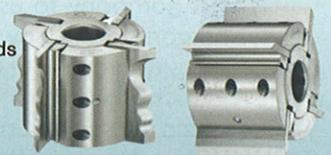
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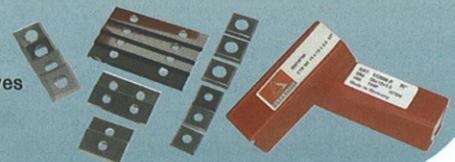
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TONG FONG CUTTERS CO., LTD.

No. 347, Pei Yang Rd., Feng Yuan, Taichung 42084, Taiwan
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Yibin Fuguicheng is the first company to use Wintersteiger's machine in China

Mr Chen purchased a set of the device for processing bamboo materials. He commented with satisfaction that "Wintersteiger's device is very useful! It indeed saved labour costs, wood materials and financial resources."

Currently, Yibin Fuguicheng has become the first company to use Wintersteiger's high-precision horizontal band saw machine in the bamboo profiles industry throughout China. Two production lines were launched with a monthly output production of 1,000 cubic metres. Mr Chen plans to increase to four more lines in the near future, adding to eventually a total annual productivity of 50,000 cubic metres at full capacity.

With superior performances in anti-corrosion, damp proof and insect proof in comparison to timber, bamboo profiles surpassed almost all timbers in outdoor applications. Now the company is planning to develop a full-bamboo house and expect to penetrate into the international market. "Chinese consumers may still hold a traditional perspective that no matter how beautiful our product is, there is still a lack of value-added potential compared to real rosewood furniture," said Mr Chen. "But the overseas consumers may have a strong environmental awareness, so bamboo as a renewable resource will perfectly cater to their environmental concepts." The house made of this material will boast a longer service

life and emit the bamboo fragrance itself, adding to a terrific sensational experience while providing a comfortable living environment to consumers.

As to the use of raw materials, the company strictly selects only glue that is compliant with national standards and ensures the product is being inspected by the National Quality Inspection Centre and having acquired the green and environmental certification. Moreover, the formaldehyde content is ensured to be less than that of most national standards in many countries. So the product will absolutely conform to the requirements for export and meet the needs for such as resort wooden houses at seaside in Korea, Japan and Southeast Asia.

"High-performance Bamboo Profile" can be applied in architecture, decoration, furniture, doors and windows, and flooring. The research results include four national patents such as: The Forestry Department, The Science and Technology Department of Sichuan Province, as well as the International Network for Bamboo and Rattan have taken it as a promotion project, indicating its huge potential and broad prospect.

UNDERTAKE DECONTAMINATION AND CREATE EMPLOYMENT

In the area of Yibin in Sichuan Province, *dendrocalamus membranaceus* and *neosinocalamus affinis* were used to produce paper in the early stage. But paper production caused a huge pollution to the environment; and planting such bamboo created no value-added space, for its earnings were even less than planting grain crops. But now, Yibin Fuguicheng's production line could leverage thousands of peasants' earnings. The annual output of bamboo is 1-2 tons per mu. To the peasants, what follows the first four years of investment in bamboo seeding and fertilisers is the net income brought by the naturally growing bamboo forest. Such a reform shall greatly drive peasant's motivation to plant bamboo.

So far, Yibin Fuguicheng has invested over 14 million yuan to develop bamboo bases in Jingjiang Township, Huatang Town and Tonggu Township in Changning County; and the high-performance bamboo profile base invested for construction in May 2012, will be able to provide 500 jobs, achieve an annual output of 360 million yuan, and 60 million yuan of profit and tax; and will allow a comprehensive development at various levels involving bamboo resources.

The local government has attached a great importance to such a new environmental enterprise like Yibin Fuguicheng, in which the company deals with decontamination and reforestation. It not only provides financial support, e.g., the government



The workshop of Yibin Fuguicheng

subsidy has further risen from previously 890,000 yuan last year, but has also made Yibin Fuguicheng involved in the municipal engineering, urban landscape construction and other large projects. And the company never let people down. Yibin Fuguicheng's bamboo profiles that are used for municipal engineering projects shall serve at least four times longer than anticorrosive wood, which may be scrapped in just two years.

Yibin Fuguicheng has fully demonstrated the charm of combining both bamboo and technology to build a new image of "technology-environment-culture inspired enterprise" by fully exerting the special resources of the "home of bamboo", taking "harmonious coexistence of development and nature" as the theme and "green technology leading the trend" as the concept. To lead peasants to increase income and acquire wealth, and to promote the development of local economy... it is believed that, driven by the strategy of "forestry as the base, science as the support, high-quality, high-yield and high-efficiency as the goals, and sustainable development as the mission", and led by the company philosophy of "careful, elaborate and attentive efforts to ensure satisfactory quality", Yibin Fuguicheng is bound to quicken the pace and march forward to ascend to a provincial leading company from currently a municipal leading enterprise. **PFA**



Yibin Fuguicheng Forestry Development Co., Ltd