

Veneerboo Products and Machine Development for Small- and Medium-Scale Enterprises in West Java

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ABSTRACT

In the countries of its origin, bamboo has already been processed and made into numerous functional objects for generations. It has been used for constructions such as bridges, scaffoldings and houses, for utilities such as furniture, baskets, musical instruments and toys, and for decorative purposes. Depending on the purpose, bamboo can be shaped into different kinds of 'production material', from its original tubular form and splits to thin strips and very thin sheets or veneer. The latter is originally produced by manually peeling the surface of a bamboo tube with a very sharp knife, a skill that is currently possessed by only a couple of aged craftsmen in Tasikmalaya, West-Java. The veneer is of high quality: with even thickness, a smooth texture, and showing the unique patterns of the bamboo nodes on the sheet. So far, this veneer has only been applied for decorative elements of woven bamboo products, despite the remarkable skill put into its production. Considering the fact that one day these aged craftsmen can no longer produce the veneer, and that no younger generation of craftsmen is interested or skilful enough to inherit the skill, an attempt was made to create a machine to produce bamboo veneer for use in small and medium-sized enterprises (SME). Moreover, considering the potential of bamboo veneer as a very strong material by itself, this research also deals with attempts to create new product designs that are mainly composed of bamboo veneer, respecting the strength and appearance of the material. This paper presents the research process and its results: a prototype of the machine and new product designs made of bamboo veneer. Finally, this research hopes to increase the productivity and income of bamboo-based SME's while elevating the value of bamboo as an industrial material

Keywords: *bamboo, product design, small and-medium-sized enterprises, veneerboo, West Java*