

## ABSTRAK

Penelitian ini bertujuan menganalisis karakteristik limbah serbuk bambu yang dihasilkan oleh CV Java Bamboo Lamina, sebuah perusahaan produksi bambu laminasi dengan sistem *make-to-order*, sekaligus merancang strategi pengolahan limbah melalui pendekatan *Quality Function Deployment* (QFD) sebagai dasar pengembangan furnitur inovatif dan juga berkelanjutan. Data dikumpulkan melalui observasi lapangan, wawancara semi terstruktur untuk mengetahui lebih dalam mengenai karakteristik limbah yang dihasilkan oleh perusahaan dan juga penyusunan matriks *House of Quality* (HOQ) setelah mengumpulkan *voice of customer* (VOC) dalam bentuk kuesioner.

Hasil penelitian menunjukkan bahwa produksi berbasis pesanan tersebut berdampak pada volume limbah yang dihasilkan. Produksi berbasis pesanan menyebabkan volume limbah serbuk bambu sangat besar dan cenderung fluktuatif, mengikuti jumlah pesanan yang masuk. Fluktuasi ini menimbulkan tantangan dalam perencanaan operasional perusahaan. Analisis dari *Quality Function Deployment* (QFD) menunjukkan bahwa serbuk bambu sisa produksi dapat dikembangkan menjadi furnitur inovatif. Dilihat dari penyusunan matriks *House of Quality* (HOQ) mengidentifikasi enam kebutuhan konsumen utama, dan penelitian ini mengarahkan fokus investasi pada teknologi dan R&D pada modifikasi material, juga beberapa produk furnitur yang dikembangkan antara lain seperti rak serbaguna atau *stool*.

Kata kunci : Bambu Laminasi, Serbuk Bambu, *House of Quality*, *Quality Function Deployment*, Desain Produk, Furnitur Berkelanjutan.

## ***ABSTRACT***

*This study aims to analyze the characteristics of bamboo sawdust waste produced by CV Java Bamboo Lamina, a laminated bamboo manufacturing company operating under a make-to-order production system, as well as to design waste processing strategy using the Quality Function Deployment (QFD) approach as the basis for developing innovative and sustainable furniture. Data were collected through field observations, semi-structured interviews to obtain in-depth insights into the characteristics of the waste generated by the company, and the development of a House of Quality (HOQ) matrix after gathering the voice of customer (VOC) through a questionnaire.*

*The findings indicate that the make-to-order production system directly affects the volume of waste generated. This order-based production results in a large and fluctuating amount of bamboo sawdust waste, depending on the number of incoming orders. Such fluctuations create challenges in the company's operational planning. Analysis using Quality Function Deployment (QFD) further demonstrates that bamboo sawdust waste has the potential to be developed into innovative furniture products. From the construction of the House of Quality (HOQ) matrix, six primary consumer needs were identified, guiding the study to emphasize technological and R&D investments in material modification, as well as the development of several furniture products such as multipurpose shelves and stools.*

*Keywords: Laminated Bamboo, Bamboo Sawdust, House of Quality, Quality Function Deployment, Product Design, Sustainable Furniture.*