

# Mastering waste wood use in the wood-based panel industry requires individual solutions

Kamm, Jochen<sup>1)</sup>; Schwartz, Daniel<sup>2)</sup>

1) General Manager, Recycling Business Unit, Dieffenbacher GmbH Maschinen- und Anlagenbau, Eppingen, Germany

2) Head of Technology Department, Wood Business Unit, Dieffenbacher GmbH Maschinen- und Anlagenbau, Eppingen, Germany

## Abstract

Dieffenbacher is a leading manufacturer of press systems and complete production plants for the wood-based panels, composites and recycling industries. As an independent family business in its fifth generation, Dieffenbacher has stood for reliable partnership and continuous progress for over 145 years. Seventeen hundred employees at 16 production, service and sales locations help Dieffenbacher's business partners benefit from local and global expertise.

To meet the different requirements and to serve the specific needs of our customers individually, the Dieffenbacher Group is divided into three business units:



Source: Dieffenbacher

The Recycling Business Unit is the youngest strategic unit within the Dieffenbacher Group. Together with the Wood Business Unit, it enables Dieffenbacher to offer complete solutions for the production of wood-based panels from fresh wood, residual wood, old wood and their combinations.

The use of waste wood in the production of wood-based panels usually serves to optimize manufacturing costs. Compared with fresh wood, using waste wood can provide a competitive advantage. The success of using waste wood largely depends on the general conditions of the location of the individual production site and the use of suitable process technology, so it is important to examine the concepts in detail.

The successful use of waste wood in the production process faces several challenges. These challenges relate to the material quality as it enters the production site, the material preparation for the

conventional production process, the actual use of waste wood in the production process and economic factors.

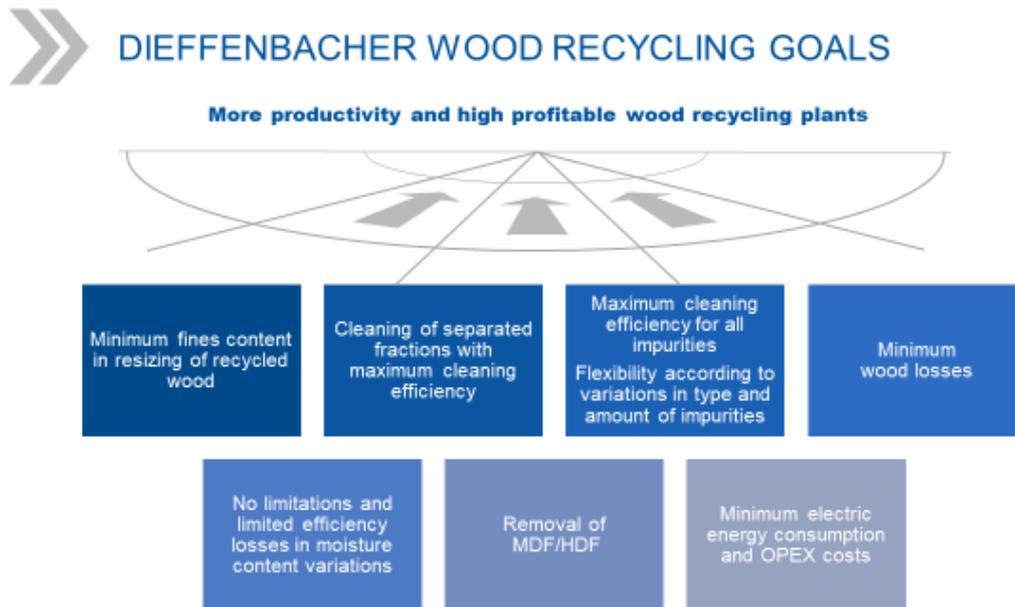
Waste wood definitions in Europe and around the world differ significantly. The variety of waste wood categories increases the pressure on the procurement and the suitable handling and cleaning systems. In addition, an increasing demand for different types of waste wood leads to both an increase in prices and declining waste wood quality.



Source: Dieffenbacher

A machine supplier cannot influence economic conditions near different production locations. The Dieffenbacher Recycling Business Unit focuses instead on dealing with the declining qualities, varying quantities and different overall level of waste wood quality for the different regions of the world. The deteriorating quality of the waste wood assortment often reflects an increase of contaminants and larger proportions of fines. However, a continuous supply of wood assortments with the highest possible degree of purity with little wood loss is crucial for successful operation. In addition, the operating costs of the recycling line for the provision of cleaned waste wood plays an important role as well. The mentioned conditions require a highly flexible strategy in machine arrangement and material flow based on the needs of the raw materials.

Summarizing the described targets, the Dieffenbacher waste wood treatment focuses on the following success parameter:



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To ensure an uncompromised production process, waste wood assortments are processed as follows:

- Pre-shredding / shredding
- Storage
- Sorting and cleaning



Source: Dieffenbacher

For the sorting and cleaning process, individual adapted solutions are used. After storing, the material is divided according to its different properties, with each fraction being treated separately. Subsequent enrichment of the removed impurities leads to efficient solutions with minimal wood losses.