

BENEFITS FROM APPLIED RESEARCH IN PROCESS ANALYSIS, LOGISTICS AND KNOWLEDGE MANAGEMENT FOR THE FOREST BASED INDUSTRY

KANDELBAUER, A.; PENKER, A.; WUZELLA, G.; LAMMER, H. &
GRONALT, M.

Abstract: For an industrial enterprise to be competitive and profitable on a long perspective the optimisation of internal processes must be performed under several aspects at the same time such as an industrial-technological aspect, an economic-logistic aspect and a strategic aspect. Although activities take place on each of these levels independently, they often play together and may depend on each other or create synergistic benefits. In the present contribution, recent examples of successful collaborative projects between the Wood Carinthian Competence Centre (W3C) and industrial partners from the Austrian wood processing and forestry sector are discussed. We illustrate how the three tools process analysis, material flow simulation, and knowledge-management may lead to integrated and sustainable solutions of complex industrial problems. Although our approach is interesting for any area of industry, the presented concept is of special significance for the wood based sector. Here, global competition due to raw material shortage and emerging markets is increasingly hard. Production technologies were established several decades ago and equipment is typically used for many years leaving little room for innovations. Financial benefits hence arise primarily through optimisation of the manufacturing process in terms of quality and throughput. The tools described are especially useful for this purpose.

Key words: Wood industry, Process optimisation, Logistics, Material flow simulation, Process analysis, Spectroscopy, Knowledge management



Authors' data: Dipl. Ing. Dr. **Kandelbauer**, A[ndreas]*; Dipl. Ing. **Penker**, A[rmulf]**; Dipl. Ing. **Wuzella**, G[ünter]**; Dipl. Ing. **Lammer**, H[erfried]**; Mag. Dr. **Gronalt**, M[anfred]***, * Universität für Bodenkultur, Klagenfurterstrasse 87-89; A-9300 St. Veit, ** Kompetenzzentrum Holz GmbH, Wood Carinthian Competence Center – W3C, Klagenfurterstr. 87-89; A-9300 St. Veit, Austria, *** University of applied life sciences Vienna, Feistmantelstr. 4, 1180 Wien, Austria, a.kandelbauer@kplus-wood.at, a.penker@kplus-wood.at, g.wuzella@kplus-wood.at, h.lammer@kplus-wood.at, manfred.gronalt@boku.ac.at

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