

## LIGNOVISIONEN

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## Proceedings of the COST Action E40 Conference

# Large diameter timber - problem or chance?

Edited by  
Alfred Teischinger

in Co-operation:  
COST - European Co-operation in the field of  
Scientific and Technical Research  
Action E40 - Innovative utilisation and products of large diameter timber  
and  
Bernern Fachhochschule, Hochschule für Architektur,  
Bau und Holz, Burgdorf, Biel, Switzerland

The COST action E40 "Innovative utilisation and products of large diameter timber" deals with a very specific topic within the forestry-wood-chain and wants to develop solutions for a proper use of large diameter timber. A conference in Biel/Switzerland within this COST action had the focus on large diameter timber as a problem or a chance. In order to find a proper answer to these very challenging questions, the conference was structured in several parts:

- Session 1 - political statements by invited speakers from forestry, wood processing and wood research including a round table discussion. Controversial points of view were to be presented and discussed.
- Session 2 - presentations concerning chances and potentials of quality grading referring to the specific properties of large diameter timber
- Session 3 - presentations showing appropriate processing technologies and products for large diameter timber
- Poster Session - providing a survey on various research activities concerning large diameter timber
- Conference summary and adoption of a conference communiqué

The proceedings provide a documentation of all the various sessions within the conference and provides some answers to open questions so as to develop a successful processing of large diameter wood.

### **COST-aided**

COST is an intergovernmental European framework for international co-operation between nationally funded research activities. COST creates scientific networks and enables scientists to collaborate in a wide spectrum of activities in research and technology. COST activities are administered by the COST Office.

# **Abstracts - Session 3: Appropriate processing technologies and products for LDT**

## **Efficient sawing technologies for large diameter round wood - innovative solutions**

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### **ABSTRACT**

Modern sawing technique focus mainly on small and medium diameter round wood due to the easier and higher-performing sawing ability. This evolution was mainly driven by the chipper-canter sawing technology which allowed increasing sawing feed speeds.

Nowadays the increasing competition between sawmills concerning the raw material opens again the focus towards the large diameter round wood. This contribution intends to give a survey of state-of-the-art sawing technologies pointing out their specific advantages and inconveniences. As a conclusion it will be showed that the available sawing technologies can process large diameter round wood in a cost efficient way.

## **Veneer based products made of large diameter timber**

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### **ABSTRACT**

Plywood production in Germany has been declining for many years although the consumption in this country is high. On the other hand, a large and still increasing supply of large diameter timber is growing in German forests. A research project, funded by the German Federal Ministry of Education and Research, aims at the economically and ecologically sustainable use of large dimension timber for plywood production. One of the objectives is to check the feasibility of a peeled veneer and plywood plant in Germany using novel production technologies.

## How do fibres properties interact with pulp properties?

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### ABSTRACT

Pulp production is based on wood. There are 2 processes, mechanical and chemical. Whatever the process is, wood fibre morphology plays a major role in pulp quality. There are fibres which give paper its properties. The more they are developed, the stronger they are; the thinner the wall, the better the sheet formation.

If process plays a major role, wood variability should not be forgotten and advantage may be add by using raw materials depend on the properties looked for. In the case of mechanical pulping for example, sawmill chips, presenting, longer fibres, could produce a stronger paper. Otherwise, log chips, with a thinner wall, permit a better sheet formation and higher optical properties.

Currently, pulp mills take advantage of both origins by mixing chips. Based on previous results, the use of large diameter timber wood would be beneficial in terms of: physical pulp properties and the use of sawmill chips. It would also be a new source of fibres. However, some problems have to be kept in mind. Sawmill chips have to be of the highest quality, and debarking is a key step in processing as a small particle of bark may be detrimental to production. When pulping new fibre quality, the process has to be adapted at the pulp mill, it is the challenge of pulp millers.

## Marketing strategies for products of large diameter round wood especially for ARGE STARKHOLZ SALZBURG

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### SUMMARY AND OUTLOOK

Timber is a material with many outstanding properties, a fact which is sometimes overlooked, forgotten or ignored. Each piece of produced timber is a success.

Competition between sawmills weakens the position of timber on the market. The timber industry should focus on competitors promoting the use of other materials such as steel and concrete

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An die

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