



Participating countries: AT, BE, BU, CH, HR, DE, DK, ES, FI, FR, GR, HU, IE, IT, LV, LT, NL, NO, PL, PT, SE, SI, SR, SK, UK

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Figure 1: In-line MC measuring system and hand-held MC meter



Figure 2: In-line strength grading

Working Group 1: Scanning for wood properties

WG 1 focuses on the technological aspects of novel scanning and includes:

- Technologies for measuring properties of wood
- 3D scanning of stems and logs for quality assessment, grading and optimisation of conversion procedures
- Scanning of sawn timber, components and boards for grading and classification purposes
- Evaluation methods for research-oriented and industrial scanning systems
- Detection of wood properties for optimal allocation of wood raw material and selection of material for value added products

Working Group 2: Moisture content and distortion

The distortion of sawn timber products is normally related to moisture content (MC) changes during the drying process or under end use conditions. Methods for measuring MC and assessing distortion are very important. WG 2 focuses on the following topics:

- Establishing MC and distortional requirements for timber products
- Designing quality control systems
- Methods for drying to lower MCs
- In-line determination of MC

Working Group 3: Strength, stiffness and appearance grading

WG 3 focuses on reviewing the use of existing systems of measurement, encouraging their wider application and providing a forum for co-operation in the development of new advanced grading systems. The following topics are included. Working areas for suitable and accurate grading are:

- More advanced non-destructive methods and combination of methods for strength grading. For example, flexible systems combining strength and appearance
- More accurate, high-speed machines at a reasonable cost
- Grading early in the production process. For example, grading logs to obtain an enrichment of logs that, after sawing, are more likely to give higher yields of structural timber
- Visual strength grading by means of surface scanning techniques. Existing systems could be further developed for grading with respect to strength.

Objectives:

- To define the requirements set for timber products and components
- To improve the quality control of timber products and components
- To ensure fitness for purpose and optimal value
- To promote the improvement of specifications
- To contribute to value-optimal production
- To contribute to the economic optimisation of production so that the full environmental and sustainability benefits of the forestry wood chain can be realised
- To be able to measure the relevant parameters and properties related to the set of requirements
- To broaden the knowledge base and improvement of measurement procedures

Main Achievements:

- State of the art related to measurement systems used in the 25 European countries
- Very well attended workshops and conferences showing a great interests in issues presented and discussed during this Action
- Large number of publications related to the scientific area of this Action
- Active participation of industrial people providing information about industrial needs for the further development of scanning systems for different applications
- Running a co-ordinated web-based questionnaire on requirements and specification of end-use-related properties in all countries participating in this Action