Related activities to COST E24

DTI Wood Technology is involved in 'Reliability of Timber Structures' through the following activities

- Design codes
- Certification
- Standardisation (test methods, performance, product and control specifications)
- Testing
- Industrial- and official funded R&D

Special attention is in the field of

- Long term mechanical behaviour (DOL/Creep) of wood-based panels
- Long term durability in general
- Structural physical, mechanical and performance (elements) properties of timber and wood-based panels

Industrial R&D work is confidential by nature, but with regard to official funded R&D work, the following selected projects can be mentioned.

EU project. Quality of Life Programme. **'PANELS' Enhancing the Efficiency and Competitiveness of Wood-Based Panels in Construction**

Objectives

The principal objective of this project is to enhance the efficiency and the competitiveness of wood-based panels used in construction, through:

- A better understanding of panel properties and behaviour
- The use of more reliable and consistent test methods at the European level
- Facilitating innovation in the use of wood-based panels
- Standardisation of manufacturer specific performance criteria

Material Parameters (with respect to Cost E24)

- To quantify the influence of time after manufacture on the mechanical performance of cement-bonded particleboard. This result will strongly influence the calculation of the time-modification factors (k_{mod}, k_{def})
- To determine the appropriate values of k_{mod} and k_{def} for isocyanate binder wood-panels bonded with isocyante binders, and to gain more experience in assessing the long- term performance of wood-based panels with the new binder.
- Establish a performance database for creep and duration of load panel and planar shear using new test methods developed in the FAIR SHEAR project

EU FAIR Programme: 'SHEAR' Extending Markets for Wood-Based Panels by Developing a Better Understanding of Shear Test Methods and Board Shear Properties

Objectives

The principal objective of the project is to facilitate the increased use of wood-based panels in applications where they are required to carry shear forces. This will be achieved by developing a better understanding of shear test methods and board shear properties and how these relate to the design and behaviour of components and structures.

EU -Competitive and Sustainable Growth Programme: 'PLYWOOD' Calibration and Testing for the Evaluation of Plywood Glue Bond Performance in accordance with EN 314-1 and EN 314-2

Objectives

The principal objectives of this project is to develop a PC-based training and calibration system for evaluating plywood glue-bond performance according to EN 314 by:

- studying the reproducibility and the accuracy of PC-based image analysis techniques
- developing a PC-based image analysis system
- developing a database user programme including factory and training/statistic programme for the ongoing updating of personnel
- testing and evaluating the developed PC-based system with selected samples in industry and laboratories

The Co-Normative Objectives are to:

- present a PC-based system that would be suitable for use by the plywood factories, accredited laboratories and notified bodies involved in the evaluation and certification of glue bond performance
- validate the test and requirement methods (EN 314-1 and EN 314-2)
- validate the procedures for attestation of conformity (CPD)