

Acronym: COST E34

Title: Bonding of Timber

Duration: 17/09/2003 – 18/02/2008

Abstract

COST is an intergovernmental European framework for international cooperation 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. The main objective of the present Action was to achieve improvement in bonding timber and wood towards a higher common technical, economic and environmental standard.

E34 “Bonding of Timber”, was organized into three different parts, reflecting the three Working Groups. The three special topics studied were:

- Bonding of timber at the site in repairing wooden constructions
- Bonding of green/wet wood to overcome the mentioned problems of moisture content induced changes in shape, and
- Various principles of the bonding process of timber and wood on a basic and partly theoretical level.

CHIMAR participated in the WG3, whose ultimate goal was to achieve progress leading to an effective and safe utilization of adhesives for wood used alone and/or in combination with other materials. For this reason, the specific WG was active on (i) monitoring the hardening and gelling behaviour of adhesives and resins, (ii) various sophisticated analytical techniques, (iii) on special effects occurring during the bonding process and influencing the adhesion process as well as the bonding quality and (iv) on the modelling of the hot press process. CHIMAR concentrated among other topics on analytical techniques such as FT-NIR for the structural characterization of formaldehyde-based resins (information on the adhesive components and the bond formed in the adhesion process).