

MECHANICAL PERFORMANCES OF SOLID WOOD USED IN BUILDINGS: EFFECTS OF MOISTURE INTERACTION AND NATURAL DRYING

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SCIENTIFIC CONTEXT

- ❑ Regional interest of White Fir applications
- ❑ Wood cracking after logging
- ❑ Green wood slices > 25 cm in diameter
- ❑ Technique for measuring radial and circumferential strain
- ❑ Experimental and numerical analysis of the cracking process



Fig. 1 : Slice cracking induced by natural drying of white fir slice

DEVICES AND EXPERIMENTAL METHOD

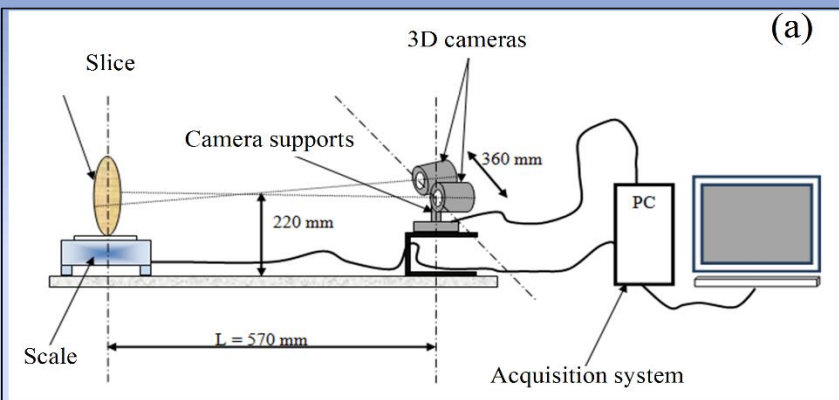


Fig. 2 : Schematic of the experimental setup

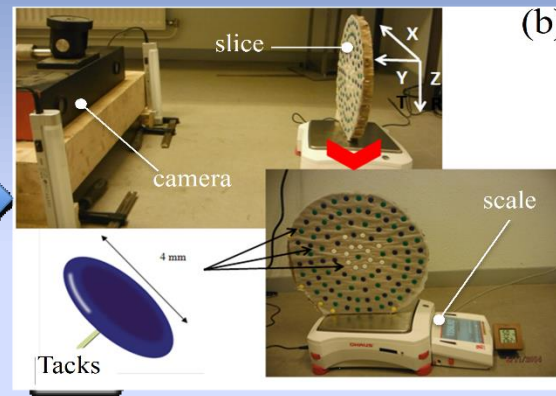


Fig. 3 : Experimental setup

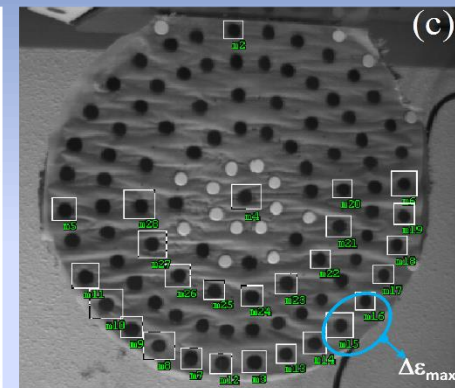


Fig. 4 : Numbering of targets

RESULTS

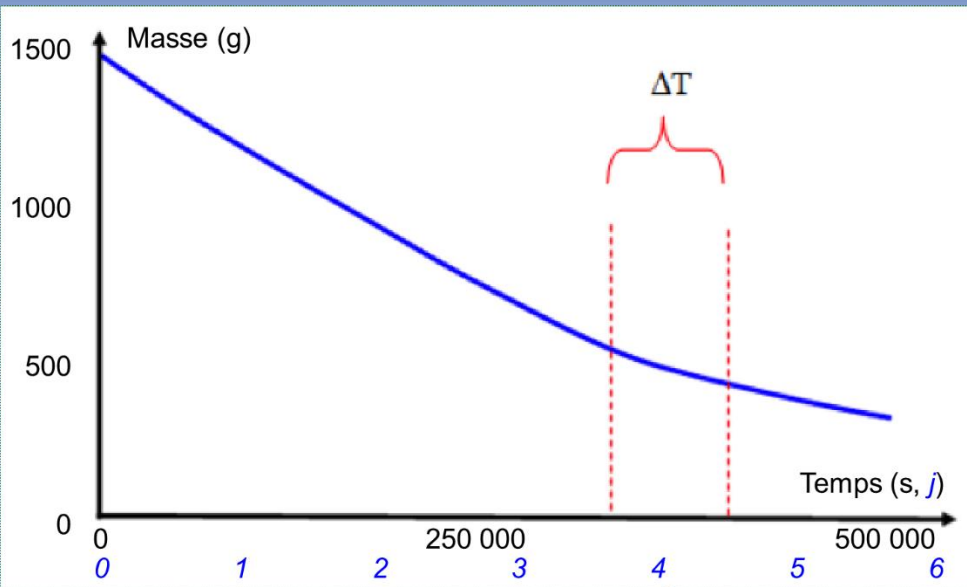


Fig. 5 : Mass loss during drying

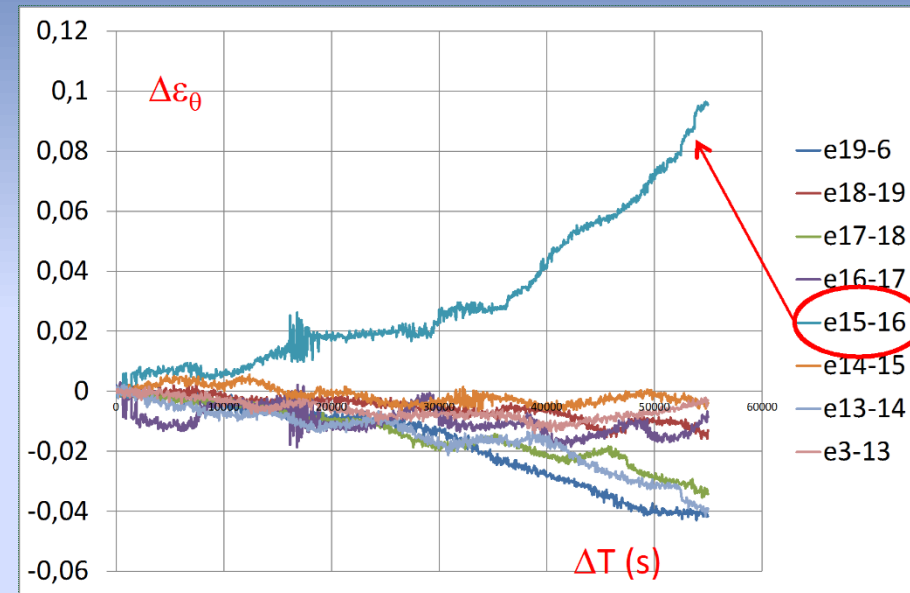


Fig. 6 : Circumferential deformations

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