Research Article:

ANALYSIS OF DECAY ANISOTROPY BY X-RAY COMPUTER TOMOGRAPHY

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Abstract:
We are aiming to make up a new method for simulating the strength losing process of timber structures attacked by fungi. To realize this, it is necessary to know the decay developing velocity along the three different directions of wood anisotropic axes. So we carried out decay developing tests of small specimens in three anisotropic directions using white-rot and brown-rot fungi. The results were estimated as density loss variations using X-ray CT equipment, and then the relationships between density loss and strength reduction were examined. As a result, the velocity of decay progress was higher in longitudinal direction than radial/tangential directions. From CT images, differences of decay patterns according with the decay progress direction were found.

Key words: decay anisotropy; X-ray; computer tomography (CT).

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