ー抄録（Abstract）ー

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トドマツ水食い材の乾燥過程における振動特性の経時変化

大崎　久司　　久保島吉貴[*1]　　外崎真理雄[*1]　　太田　正光[*2]

Changes in Vibrational Properties of Wetwood of Japanese Fir (*Abies Sachalinensis* Mast.) with Time During Drying

Hisashi OHSAKI　Yoshitaka KUBOJIMA　Mario TONOSAKI　Masamitsu OHTA

Temporal changes in vibrational properties of wetwood of Japanese fir (*Abies sachalinensis* Mast.) during a drying process were investigated. Specimens were cut from wetwood defined as heartwood with extremely high moisture content and normal wood whose moisture content was not so high, and matched in the R-direction. Green and water-saturated wood specimens were prepared. The specimens and the vibration testing system were put in an electric drying oven, where a free-free vibration test was conducted at intervals of 5 to 20 minutes. When the green specimens were used, the resonance frequency and loss tangent of both wetwood and normal wood reached the minimum and maximum, respectively, early in the drying. The minimum and maximum of the wetwood were smaller and larger than those of the normal wood. These differences between the wetwood and normal wood were mainly caused by the differences in initial moisture content because such differences, which existed in the green wood, disappeared once a water-saturated condition was reached.

Key words:　*Abies sachalinensis* Mast., wetwood, high-temperature drying, vibrational properties
トドマツ，水食い材，高温乾燥，振動特性

トドマツ（*Abies sachalinensis* Mast.）の水食い部の乾燥過程中における振動特性の経時変化を調べた。試験体は水食い部と，含水率がさほど高くない正常部とにR方向にマッチングするように切り分けて作製した。生材状態と飽水状態の試験体を使用した。試験体と測定装置を電気恒温器中に設置して，5～20分間隔で両端自由たわみ振動試験を行った。

生材試験体では，水食い部と正常部はともに，乾燥の初期段階で共振周波数は最小となり，損失正接は最大となった。水食い部の値は正常部よりも，共振周波数では小さく，損失正接では大きかった。試験体を飽水状態にするとこれらの差が消失したことから，水食い部と正常部の木材特性の経時変化における違いは，主に初期含水率に起因するものであると思われる。

－技術部　製材乾燥科－
－ *1：（独）森林総合研究所－
－ *2：東京大学大学院－