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2016 PROCEEDINGS OF THE KOREAN SOCIETY OF WOOD SCIENCE AND TECHNOLOGY FALL MEETING

2016년 12월 1일(木)

(인천송도컨벤시아)

주최 KSWST 사단법인 한국목재공학회 The Korean Society of Wood Science & Technology

후원 KFWIS 목재산업단체총연합회 SY WOOD 농촌진흥청

2016 한국목재공학회
추계 학술발표대회 일정

○ 일 시 : 2016년 12월 01일(목)

○ 장 소 : 인천송도컨벤시아

12월 01일(목)

12:00 - 13:00	등 록	
13:00 - 13:05	개 회	
13:05 - 13:10	인 사 말	(한국목재공학회 김남훈 회장)
13:10 - 13:20	축 사	(산림청 김용하 차장)
13:20 - 13:50	특 강 I	(산림청 권영록 과장)
13:50 - 14:20	특 강 II	(국립산림과학원 최돈하 부장)
14:20 - 16:00	포스터 발표	
16:00 - 18:00	현장견학	에스와이우드(주) 木訥館
18:00 - 20:00	간 친 회	

발 표 논 문 목 차

특 강

전 시 발 표

A 분야 목재물리, 목재건조

<P-03>

Characterization of heat treated wood from Korean white pine (*Pinus koraiensis*) and Royal paulownia (*Paulownia tomentosa*)

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Abstract

The objective of this work is to investigate the effect of heat treatment on color changes, wettability, physical and mechanical properties of Korean white pine (*Pinus koraiensis*) and Royal paulownia (*Paulownia tomentosa*). Samples were heat treated using an electric oven with a programmable controller at 160°C, 180°C, 200°C, and 220°C for 2 h. The results showed that the color of heat treated wood became darker with the increase of temperature. The weight loss and volume shrinkage increased with the increase of temperature. Heat treated wood evidently absorbed less water than control, showing lower equilibrium moisture content and water absorption. The wettability of wood decreased with heat treatment. In addition, Royal paulownia showed higher degree of change in contact angles than Korean white pine. Evaluation of mechanical properties showed that modulus of rupture (MOR) and modulus of elasticity (MOE) in both woods decreased with the increase of temperature. However heat treatment at 160°C tended to increase the MOE of wood.

Keywords: Heat treatment, Korean white pine, physical-mechanical properties, Royal paulownia, wettability