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Application of Apricot Pruning Wastes in Particleboard Manufacture

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For this study, pruning wastes of Apricot from Shahroud region were applied. This material was reduced to wood particles and used with industrial wood particles for particleboard manufacturing. Apricot wood particles, prepared with knife ring flaker chipper, were applied to manufacture particleboards with industrial wood particles. Percent of Apricot (0, 15, 30 and 45) and press time (5 and 7 minute) were the variables of experiment. The UF resin was used for this study. After manufacturing of particleboard with 35×40×1.6 cm dimension and density of 0.6 gr/cm2, experimental samples were cut for evaluation of physical and mechanical properties, according to the standard (EN 326). Results showed that with increasing the percent of Apricot particles, the amount of mechanical properties (MOE, MOR and IB) enhance significantly. The effect of Apricot particles mixture of MOE was significant (α=0.05). This effect on MOR and IB of boards was significant, too (α=0.01). With increasing Apricot percentage, IB decreased but IB of all boards met the standard. Water absorption resistance for 24 hours improved with increasing of Apricot particles percentage (α=0.05).The effect of press time was not significant on all properties. Finally, the combination of 45% Apricot pruning and the shorter press time (5 min) was identified as the best treatment.

Keywords: Particleboard, Apricot pruning, Bonding strength, Water absorption, Thickness swelling

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