Preparation of a Kiln Drying Schedule for Poplar (*Populus nigra*) Lumber of 5 cm Thickness

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Abstract

In order to establish a kiln drying schedule for Poplar (*Populus nigra*) lumbers of 5 cm thickness commercially cut from Taleghan region, three schedules, namely T8-F4, T8-F5 and T9-F4 were adopted to dry the lumbers to the final moisture content of 11 ± 2% . Dry bulb temperatures for the schedules were adjusted at 54, 54 and 60 °C, while the final dry-bulb temperatures were adjusted at 82, 82 and 71 °C, respectively. The severity of surface, internal checks and warp in the lumbers were measured before and after the drying process and quality control methods were used to analyze wood defects. Results indicated that drying of Poplar lumber using each of the three schedules was satisfactory; however, the third schedule (T9-F4) resulted in better drying quality than did the others. Also, equalizing of lumbers for 24h is recommended.

Key words: Wood, Poplar, Kiln schedule , Drying, Drying defects

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