

## **Abstract**

**This study on the small-diameter timber poplar done at (Amol and Babol) country north. This study visual grading small-diameter timber poplar was use for sawmill and peel. Visual grading of the knot, decay, warping and be other defects and this defects at final yield product the effect. So this small-diameter timber poplar first was visual garding and so yield each grade of the lumber cubic meter and ply cubic meter productive at researched sawmill and peel factories. So allowed strengths grads according to basic data mechanical strength in cluding species *Populous alba*, *Populous nigra* and *Populous deltoids* to be fied was calculated. Experimental results are showed that small diameter poplar and their timber production have more firsts and selects of grades than others grades on the basis of national grading of Iran (1275 and 8073), United State Forest Service and National Hardwood Lumber Association. Defects such as frost cracks in small diameter poplar and core in poplar timber are influence onto application usage and ranges of grades scales and effective defects are determined by average measured of defects, national standard rules and field research Also, their application usages are very sensitive to the effective defects, in the practical condition and for blots ply association grading 1275 and (APA-PS 1) standard number American Plywood Association Product Standard for first grade and third grade and grade C for ply the most ply volume productive and then grade A for ply the ply volume productive in the following categories. Defects such as knot and cracks in small diameter poplar and core in poplar ply are influence onto application usage and ranges of grades scales and effective defects are determined by average measured of defects, national standard rules and field research. Also, their application usages are very sensitive to the effective defects, in the practical condition.**

**Key words: Visual grading, Small-diameter timber Poplar, Allowed strengths, Defects**



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**The Thesis Submitted for the Degree of Master of Science  
(In wood Composite products)**

**Visual grading of Small-Diameter Timber  
Poplar and stablishing its allowed strengths**

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Januray 2014