

**COMPARATIVE STUDIES OF ELASTIC PROPERTIES  
OF COMMERCIAL-TYPE WOODS**



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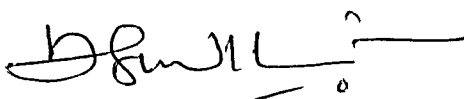
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**LAPORAN AKHIR PENYELIDIKAN 'COMPARATIVE STUDIES OF ELASTIC PROPERTIES OF COMMERCIAL-TYPE WOODS'**

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## COMPARATIVE STUDIES OF ELASTIC PROPERTIES OF COMMERCIAL-TYPE WOODS

### ABSTRACT

Wood-based industries has been extremely expanded in develop country like Malaysia as one of the major contribution to the economic growth of the country. Since wood has become popular in our daily usage, one should conscious about the quality of the wood as natural raw materials. Talking about the quality of woods normally we are talking about the type of woods been used. Conventionally, to identify the quality of wood people look at the prices of the woods, which high in price indicated the woods are in a good quality. Scientifically, by going through certain high technological approach, the quality of woods could be identified. In this project, the ultrasonic technology has been used to identify the quality of commercial-type woods by determine the elastic properties of the woods. Ultrasonic measurement technique is apart of non-destructive testing without damaging the targeted samples. Many papers have been discussed nor published regarding the non-destructive testing of woods and forest product industries previously. The objective of the project is to estimate the elastic properties of the selective commercial woods in collaborations with Woods Technology Department, UiTM Pahang. The selected commercial woods have been used are Kempas (*Koompadia malaccensis*), Chengal (*Neobalanocarpus heimii*), Tembusu (*Fagraea Fragrans*), Simpoh (*Dillenia Spp.*), Rubberwood (*Hevea Brasiliensis*) and Yellow Meranti (*Shorea Spp.*). Thus, the data of elasticity could estimate the quality of woods macroscopically.