TO STUDY THE PERFORMANCE OF MICROWAVE ABSORBER CONSTRUCTED USING WASTED

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YBhg. Prof.,

LAPORAN AKHIR PENYELIDIKAN "TO STUDY THE PERFORMANCE OF MICROWAVE ABSORBER CONSTRUCTED USING WASTED MATERIAL"

Dengan segala hormatnya perkara di atas adalah dirujuk.

Bersama-sama ini disertakan 4 (empat) naskah Laporan Akhir Penyelidikan bertajuk "TO STUDY THE PERFORMANCE OF MICROWAVE ABSORBER CONSTRUCTED USING WASTED MATERIAL" untuk makluman dan simpanan pihak Prof.

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Ketua
Projek Penyelidikan

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ABSTRACT

The development of the microwave absorber focuses on the pyramid shape absorber, which is theoretically easier to comprehend compared to other shape. In theory, this type of absorber is expected to operate at frequencies of 10GHz. Apart from that, the cost involved is also taken into account wherever possible. A local component will be used in order to produce absorber that is cheaper than those available in the market. This project presents one of the usages of coconut shell carbon as microwave carbon mixed with water based paint painted on the polystyrene cone. The array of cone then assembled together onto the polystyrene base and the data absorption of developed absorber prototyped is tested and compared to the available commercial absorber. The prototype has been successfully implemented and tested for its functionality and performance. The data absorption rate of the prototype is nearly 92% of the data absorption rate for commercial absorber. The outcome from this research project hopefully can be utilized in building a low cost anechoic chamber. The Anechoic Chambers are commonly used to perform a variety of indoor RF measurement involving spacecraft, antenna and electronic systems. These measurements include antenna gain, radiation pattern, beam width, directivity, polarization, impedance, radar cross section, electromagnetic interference (EMI) and electromagnetic compatibility (EMC).