

The Growth Mechanism of Polycrystalline Diamond Thin Films Deposited by MACVD under Bias with Diamond

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ABSTRACT

The purpose of this thesis is to design a method for adjustment control parameters, based on Adaptive Model Following Control Theory. According to the wanted characteristics of real physical systems, control engineers can use adaptive model following control theory to design a suitable reference model and use feed forward, feed back loops to control system's output. When arriving perfect control, then, the plant's output can track to the reference model's output. In practical implementation of control theory, many different control parameters need adjustment. However, most of these methods rely on control engineers' experiments resulting from trial and error, and it usually causes unexpected errors. In order to improve this defect, this thesis proposes a practical solution technique for such problems. We propose a law for adjusting control parameters using simulated plants and flight vehicles model to verify the characteristics and practices of the adjustment law. From the results of computer simulation, it is demonstrated that this law is much suitable for stable, time-varying, non-linear systems.

Keywords : Adaptive Control ; Model following Control ; Adjusting Control parameters

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