微波吸波與頻蔽材料之電磁特性分析

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摘 要

本論文主要是探討平板材料的電磁屏蔽與吸波特性，研究中建立了兩種理論模型，第一種為正向模型，第二種為逆向模型。在正向模型的部分中，我們針對多層介質已知的電磁參數(、)與厚度來分析其電磁屏蔽與吸波特性。在逆向模型的部分中，我們針對單層介質材料量測其電磁屏蔽與吸波特性，再利用所推導出的解析方程式來計算此材料的電磁參數；在此逆向模型中，所需要的參數為介質的厚度與所量測的散射參數大小及相位。正向模型的部分，我們建立了頻域分析方法，進行了多層介質材料的電磁屏蔽與吸波特性的分析。在逆向模型的部分，散射參數的大小及相位必須很準確，則反推出的電磁參數就很準確。

關鍵詞 : 電磁屏蔽 ; 屏蔽材料 ; 吸波材料 ; 正向模型 ; 逆向模型

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