利用設線分析電磁相容吳反射室=ray analysis of emc fully anechoic chamber

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摘 要

高速電子系統與高頻通訊設備市場持續的成長皆會伴隨著電磁相容性(EMC)的問題，近來國家性與國際性的管理EMC的問題很迫切的被建立起來。EMC的全認證測試都可經由一小型的電波無反射室來完成認證要求，以行之多年，大多這類的實驗室主要是被使用在先期的驗證測試。 過去建設暗房主要的問題皆集中在暗房內RF吸收材料所可使用的效能，由於這7m × 3m × 3 m的全無反射室是相當緊密的，亞鐵鹽吸收磚是常常被使用來調整一些較棘手的實驗室，來吸收反射場。無論如何，來自於側牆與上下牆所造成的反射量，對於測試的容區是相當具有影響的，此反射量常會使得無法符合EN-61000-4-3的場地要求。 本論文將分析電波無反射室(FAC)內部之電磁波傳輸環境，論文中提出一個實驗經驗模型以及利用一次射線的方法，利用吸收體正向入射時有最佳的吸收特性，由亞鐵鹽三角錐的方式，增加最少量的吸收體，來改善補償場均勻度，得以有相當優越的特性來符合標準場均勻度得要求。

關鍵詞 : 電磁干擾 ; 電磁相容(EMC) ; 電波無反射室(FAC) ; 一次射線 ; 亞鐵鹽吸收體 ; 三角錐柱

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