以案例為基礎之維修管理資訊系統建置-以台中發電廠為例

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摘 要

本研究針對台中發電廠環保控制設備維修流程與系統架構提出改善方案，結合電子自動化技術 、通訊協定轉換、案例式推理技術（Case-Based Reasoning，CBR）、關聯式資料庫，建立一套維修 管理資訊系統（Maintenance Management Information System, MMIS），以期縮短設備故障排除時 間，提高設備性能的可靠度。 在現有的硬體架構下，佈建EP/ASH控制網路連接各種不同型態的PLC控制器，利用通訊協定轉換 與RSView圖控系統操作介面的整合，達到全廠及時資料存取與監控。維修資料來源是圖控工作站的內 建資料點、控制系統的數位與類比信號點、工作站記錄與維修案例資料，利用網路提供的互動管道， 以網頁方式提供不同使用者共享資源，並且透過案例式推理流程，擷取案例庫中過去相關可供參考的 案例知識與維修所需的各項資訊，提供值班人員與維護工程師有效的故障診斷方法，以利進行故障排 除工作。 在日益嚴苛的環境政策下，透過本研究開發的維修管理資訊系統，確實可以降低設備故障請修次 數與縮短故障排除時間，對於台中發電廠環保控制系統穩定運轉有相當大的助益，間接提高電廠整體 的營運績效。

關鍵詞 : 電子自動化 ; 案例式推理 ; 維修管理資訊系統 ; 故障診斷

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