

微振訊號處理技術於科技廠房基座設計之研究

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摘要

The precision equipments and instruments of the High-tech factory are very sensitive to ambient vibration. Therefore, the production of equipments that generally expect higher quality of vibration specification needs to install the deck vibration to reduce ambient-vibration. Thus, this impels the momentum of micro-vibration meets vibration standards and enhances the yield rate of products. In the past, the factory design failed to grasp the behavior of ambient-vibration and the reinforcement improvement was measured even after the factory construction is completed. Besides, the signal that quantity examines is very faint that need to change the signal into ambient-electric current or low-voltage through the specific inductor. And amplify its amplitude via the operational amplifier but bring some of miscellaneous signals during procedure. Thus, this study uses finite element software SAP2000 to simulate and analyze the common equipment of the High-tech factory foundation due to analyzes the signals of ambient-vibration and recombines miscellaneous data for vibration force by Gauss normal distribution that proposed by this study. The results showed that compare actual vibration value and simulation vibration value in the foundation can grasping the influence of the structure by ambient-vibration during design phase and can promoting the

reliability of the foundation design in the future.

關鍵字：High-tech factory, Ambient-vibration