滾齒機控制器參數調整之研究- 以FANUC為例

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摘 要

齒輪是目前運用最廣泛的傳動元件之一，隨著科技的發展，齒輪精度的要求也相對提昇，其製造方法也就特別重要。目前在工業界中，滾齒機、刨齒機及各型專用機廣泛地應用於各型齒輪的製造中，其中滾齒機更因其機器設定容易，生產效率高，產品品質穩定，重磨後也能保持相當的精度和品質，因此被廣泛運用，但是滾齒機與其它加工機台相比，滾齒過程中的斷續切削容易造成機台的震動。所以為了提高滾齒過程中的機台穩定性，本研究即著重於滾齒機台組裝完成後，針對FANUC控制器的參數設定，在控制器調整的校驗過程中，利用Servo-Guide軟體擷取馬達伺服端Encoder的路徑誤差訊號，以利判斷各軸之速度增益頻寬調整，進而抑制機台高頻共振的效果。

關鍵詞 : 滾齒機、鉋齒機、斷續切削、速度增益

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