



即時偵測曲面噴塗技術

提案人：廖英志 教授

單位：國立臺灣大學 化學工程學系/研究所

簡歷：(可列出相關連結，例如系所、研究室網頁)

http://www.che.ntu.edu.tw/ntuche/cht/prof_detail.php?id=36

國立台灣大學化工學士，1995

國立台灣大學化工碩士，1997

美國普渡大學化工博士，2004

市場及需求：

1. 在面對生命週期短之生產工件，可縮短因應不同物件所需之產線建置時間。
2. 可應用於未來三維印刷電子電路之裝置製程。

技術摘要(含成果)：

本發明涉及一種曲面列印方法，是應用於具有列印噴墨頭與攝像鏡頭之印刷系統，包括下列步驟：判斷待列印面曲面狀態；依據曲面計算塗佈路徑與印刷方式。本發明的曲面列印方法依照工件待列印面的不同，攝像鏡頭會去捕捉當下工件曲面的輪廓、距離與當下印刷圖樣的投影等，只要給印刷系統印刷圖樣的位置，即可即時印刷並輸出高品質的曲面列印。

優勢：

1. 即時印刷並輸出高精度的曲面列印圖像品質。
2. 攝像鏡頭偵測，可隨時對應不同工作路徑以及因應產線突發狀況。

競爭產品：

專利現況：

本技術專利申請中

聯絡方式(請不用填)：

臺大產學合作總中心

Tel: 02-3366-9945, E-mail: ntuciac@ntu.edu.tw



Real-time Detect Curved Surface Printing System

PI : Prof. Ying-Chih Liao

Department of Chemical Engineering, National Taiwan U.

Experience:

http://www.che.ntu.edu.tw/ntuche/cht/prof_detail.php?id=36

Purdue university Ph.D. Chemical Engineering

Taiwan university M.A. Chemical Engineering

Taiwan university B.S. Chemical Engineering

Market Needs:

(1) Shorten the setup time for any early development when you are facing different type of work piece or product with short lifecycle.

(2) Apply in printing electronic circuit related industry.

Our Technology:

The invention relates to a curved surface printing method, which is applied to a printing system with a printing inkjet head and an imaging lens, comprising the following steps: determining a surface state of a surface to be printed; calculating a coating path and a printing mode according to the curved surface. The curved surface printing method can capture the contour of the current surface of workpiece, the distance and the projection of the current printing pattern, etc. According to the difference of the workpiece surface to be printed, the printing system can output immediately with high quality as long as we provide desired location on the workpiece for 2D pattern

Strength:

- (1) Can output immediately with high quality
- (2) Real-time Detection can prevent collision and personnel safety

Competing Products:

Intellectual Properties:

This technical patent is under applying.

Contact (do not need to fill out):

Center for Industry-Academia Cooperation, NTU

Tel: 02-3366-9945, E-mail: ntuciac@ntu.edu.tw