THE STUDY OF CUTTING PATH FOR WIRE ELECTRICAL DISCHARGE MACHINING ON COMPOUND SURFACE

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ABSTRACT

THERE IS AN INCREASING DEMAND OF DEVELOP COMPLICATED MOLD IN INDUSTRIES WEDM (WIRE ELECTRICAL DISCHARGE MACHINING) PLAYS AN IMPORTANT ROLE IN COMPLICATED MOLD. THE WORKS COMPLICATED AND DIVERSIFY AN MAJOR .THE GRAPH OF CHANGE ARE IMPORTANT AND OBLIQUE POLYHEDRON IS A WEIGHT-BEARING POINT. THE PRINCIPAL OF THIS PROJECT IS TO DEVELOP GRAPHICS DISPLAY INTERFACE. IN THIS THESIS, THE PRINCIPLE OF WEDM AND COMPOUND CURVED SURFACE WILL BE INTRODUCED AND CHOOSING APPROPRIATE MACHINING PARAMETERS IS A VITAL JOB FOR OBTAINING EXPECTED PRODUCTIVITY AND QUALITY. SINCE THE MACHINING PARAMETERS ARE NOT ONLY GRATE NUMBER , BUT ALSO INTERACTED BETWEEN THEMSELVES , IT IS OBVIOUS THAT ONLY EXPERIENCED AND SKILLED MACHINE OPERATORS ARE CAPABLE OF HANDLING THE JOB. ALTHOUGH THE MANUFACTURERS OF THE WEDM MACHINE USUALLY PROVIDE THE USERS WITH A SET OF MACHINING-PARAMETER TABLE, IT DOESN'T ALWAYS SERVE THE NEEDS OF THE USERS. THE PROJECT WILL BE COMPARED WITH THAT OF THE CURRENTLY WIDELY USED SOFTWARE AND CONTRIBUTE MACHINING-PARAMETER TABLE TO SOLVE QUESTION.

Keywords : COMPOUND CURVED SURFACE、WEDM (WIRE ELECTRICAL DISCHARGE MACHINE)
、MACHINING PARAMETERS

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REFERENCES

[1].CHONGLIN LIU AND DONALD ESTERLING ,"SOLID MODELING OF 4-AXIS WIRE EDM CUT GEOMETRY", COMPUTER-AIDED DESIGN ,VOL.29.NO.12 , PP.803-810 , 1997 [2].YUAN-SHIN LEE AND BAHATTIN KOC , "ELLIPSE-OFFSET APPROACH AND INCLINED ZIG-ZAG METHOD FOR MULTI-AXIS ROUGHING OF RULED SURFACE POCKETS " , COMPUTER-AIDED DESIGN ,VOL.30.N O.12 , PP.957-971 , 1998 [3].WEN-DER UENG , JIING-YIH LAI AND JI-LIANG DOONG "SWEEP-SURFACE RECONSTRUCTION FROM THR -EE-DIMENSIONAL MEASURED DATA " , COMPUTER-AIDED DESIGN ,VOL.30.NO.10 , PP.791-805 , 1998 [4].SPEDDING,T.A. WANG, Z.Q. , "PARAMETRIC OPTIMIZATION AND SURFACE CHARACTERIZATION OF WIRE ELECTRICAL DISCHARGE MACHINING PROCESS" , PRECISION ENGINEERING, VOLUME: 20, ISS -UE: 1, JANUARY, 1997, PP. 5-15 [5].SPEDDING,T.A. WANG, Z.Q. , "STUDY ON MODELING OF WIRE EDM PROCESS ",JOURNAL OF MATERI -ALS PROCESSING TECHNOLOGY, VOLUME: 69, ISSUE: 1-3, SEPTEMBER, 1997, PP. 18-28 [6].GUO, Z.N.; LEE, T.C.; YUE, T.M.; LAU, W.S., "STUDY ON THE MACHINING MECHANISM OF WEDM WITH ULTRASONIC VIBRATION OF THE WIRE "JOURNAL OF MATERIALS PROCESSING TECHNOLOGY, VO -LUME: 69, ISSUE: 1-3, SEPTEMBER, 1997, PP. 212-221 [7].B.K. CHOI, SURFACE MODELING FOR CAD/CAM ,ELSEVIER AMSTERDAM-OXFORD-NEW YORK-TOKYO,1991 [8].E.M. MICHAEL,JOHN WILEY ＆ SONS, GEOMETRIC MODELING ,JOHN WILEY＆SONS NEW YORK-CHICHE -STER-BRISBANE-TORONTO-SINGAPORE, 1985 [9].吳建璋 , " 物件導向技術在線切割CAD/CAM軟體開發之研究 "

, 國立台灣科技大學碩士論文 , 1996 [10].張師敏,"不同曲面模型在模具設計與製造上之研究",大葉工學院機械研究所碩士論文， 1994 [11].劉德進,"以逆向工程構建任意形狀曲線與曲面 ",大葉工學院機械研究所碩士論文, 1995 [12].顏木田 , " 線切割放電加工之適應控制 " , 國立台灣大學機械工程學研究所博士論文 , 1995 [13].黃錦鐘譯, " 放電加工技術之入門實務-線切割放電加工篇之一 ", 機械月刊第二十卷第十二期 , P298-411 , 1994/12 [14].顏木田 廖運炫, " 由第十二屆國際放電加工研討會看放電加工研究發展方向 ", 機械工業雜誌 , P263-240 , 1998/12 [15].顏木田, " 放電加工原理與線切割機控制系統技術 ",機械工業雜誌, P243-247 , 1998/11 [16].梁瑞芳 戴亞君 蔡承甫 , " 線切割技術 " ,機械工業雜誌, P98-128 , 1999/2 [17].張渭川 , 放電加工的結構與實用技術 , 全華科技圖書股份有限公司 ,1986 [18].黃錦鐘 , 高級放電加工技術 , 全華科技圖書股份有限公司,1987 [19].魏維良 , CNC線切割放電加工 , 全華科技圖書股份有限公司 , 1988 [20]. 魏維良 , CNC線切割程式設計 , 全華科技圖書股份有限公司 , 1988 [21].齊藤長男著 蘇品書譯 , 線切割放電加工 , 復漢出版社 ,1998 [22].齊藤長男監修 賴耿陽譯 , 放電加工機活用 , 復漢出版社,1998 [23].黃明達 , VISUAL BASIC 中文版範例與解析 , 松崗出版社 ,1995 [24].AUTOCAD R14 自學手冊 , AUTODESK.INC , 1998