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(54) Title of the invention : A METHOD OF CONTROLLING HEAT GENERATED ALONG THE WELDING DIRECTION BY CONTROLLING GEOMETRY OF FRICTION STIR WELDING TOOLS

<p>(51) International classification :A61P 090000, A61P 250000, A61P 370000, B23K 201200, B29C 650000</p> <p>(86) International Application No :PCT// Filing Date :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : <b>1)Dr. Raffi Mohammed</b> Address of Applicant :Professor, Department of Mechanical Engineering, NRI Institute of Technology, Pothavarappadu Village, Agiripalli Mandal, Krishna District, Andhra Pradesh, India-521212 ----- <b>2)Dr.C.Sailaja</b> <b>3)Dr. Rajasekaran Shanmugam</b> <b>4)Dr. Avinash Ben</b> <b>5)Mr.M.Siva</b> <b>6)Dr.T.Subba Reddy</b> <b>7)Mr.R.Bhoopathi</b> Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : <b>1)Dr. Raffi Mohammed</b> Address of Applicant :Professor, Department of Mechanical Engineering, NRI Institute of Technology, Pothavarappadu Village, Agiripalli Mandal, Krishna District, Andhra Pradesh, India-521212 ----- <b>2)Dr.C.Sailaja</b> Address of Applicant :Professor, Department of Mechanical Engineering, Bangalore College of Engineering and Technology, Chandapura, Bangalore-560099 ----- <b>3)Dr. Rajasekaran Shanmugam</b> Address of Applicant :Dean-Research, Ajeenkya D Y Patil University The Innovation University, DC Building, Dr. Dy Patil Knowledge City, Charholi Budruk, Via Lohegaon, Pune 412105, Maharashtra, India ----- <b>4)Dr. Avinash Ben</b> Address of Applicant :Associate Professor, Avanthi Institute of Engineering and Technology, Cherukupalle (Village), Near Thagarapuvalasa Bridge, Vizianagaram (Dist), Andhra Pradesh (State), Pin- 531162 ----- <b>5)Mr.M.Siva</b> Address of Applicant :Assistant Professor, Department of Mechanical Engineering, St.Joseph's College of Engineering, Old Mamallapuram Road, Chennai-600119 ---- <b>6)Dr.T.Subba Reddy</b> Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Andhra Loyola Institute of Engineering and Technology, Vijayawada, Andhra Pradesh -520008 ----- <b>7)Mr.R.Bhoopathi</b> Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Sri Sairam Engineering College, Chennai-600044, Tamil Nadu, India -----</p>
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(57) Abstract :

The present invention relates to a method of controlling heat generated during friction stir welding by modifying the geometry of the welding tool. The method includes measuring the temperature distribution along the joint line during the welding process using a temperature sensor and analysing the data to determine areas of high heat generation. The shape, size, and angle of the shoulder and pin of the welding tool are modified to distribute heat evenly along the joint line, based on the temperature data analysis. The temperature distribution is continuously monitored during the welding process, and the welding tool geometry is adjusted as needed to maintain an even temperature distribution.

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