

Completed & ongoing research projects

Sl. No.	Sponsoring Agency	Title of Project	Amount of grant	Period	Co-investigator (If any)
1	Fast Track Scheme for Young Scientist, Department of science & Technology, (DST), New Delhi	Automatic Narrow Groove Welding	RS. 11,34,000	12 th July 2002 to 31 st Oct 2005	
DST experts' committee comments : Progress of the completed project is very good					
2	Board For Research in Fusion Science & Technology (BRFST), National Fusion Program of Institute for Plasma Research, Department of Atomic Energy (DAE), Gandhinagar	Weldability aspects of Low Activation Ferritic-Martensitic Steel Welded by Activated Flux Tungsten Inert Gas Welding	Rs 36,26,500	1 st Dec 2008 to 30 th Nov 2010 Ongoing	Dr Shaju Albert , Head- Materials Technology Division, Indira Gandhi Centre for Atomic Research, Department of Atomic Energy, Kalpakkam
3	Fast Track Scheme for Young Scientist, Department of science & Technology, (DST), New Delhi	Gas Metal Arc Welding with Metal Core Arc Wire	Rs 15,18,000	1 st Feb 2008 to 31 st Jan 2010 Ongoing	----
4	Indian Space Research Organization, Department of Space, Government of India, Bangalore	Friction Stir Welding of Al Alloys	Rs 13,96,000	21 st June 2010 to 20 th May 2012 In collaboration with Space Application Centre, Ahmedabad Ongoing	
5	Board For Research in Fusion Science & Technology (BRFST), National Fusion Program of Institute for Plasma Research, Department of Atomic Energy (DAE), Gandhinagar	Friction Stir Welding of Stainless Steel to Stainless steel and SS to Copper	Rs 30,15,000	Project starting date -27 th Sept 2010 to For 3 Years Ongoing	

List of original research papers

Sr. No	Name of the authors	Year of Publications	Title of the paper
1	Dr Vishvesh J Badheka	International Journal of German Welding Society, accepted for publication. It will be publish in <i>Welding and Cutting issue number 1(2010)</i>	Utilization of Conventional Milling Machine for Friction Stir Welding (FSW) of Commercial Aluminum
2	Dr Vishvesh J Badheka, Prof S.K.Agrawal and Mr Nandish Shroff	International Journal Of Mechanical And Materials Engineering Vol. 4 (2009), No. 3, 328-340	Resistance spot welding of Martensitic stainless steel (SS420)- Part I
3	Dr Vishvesh J Badheka, Prof S.K.Agrawal and Mr Nandish Shroff	International Journal Of Mechanical And Materials Engineering Vol. 5 (2010), No. 1, 43-52	Resistance spot welding of Martensitic stainless steel (SS420)- Part II
4	Badheka V.J & Agrawal S.K	International Journal of German Welding Society. <i>Welding and Cutting 4(2009)</i>	Microstructural Investigation of weld metal in low carbon steel welded by NG-GMAW (Second Best oral presentation award; National Welding Seminar 2009)
5	Badheka V.J & Agrawal S.K	International Journal of German Welding Society. <i>Welding and Cutting 5 (2008)</i>	Effect of Residual Magnetism on Sidewall Fusion in Narrow Gap Gas Metal Arc Welding
6	Badheka V.J & Agrawal S.K	International Journal of German Welding Society. <i>Welding and Cutting 5 (2007)</i>	Design and Development of GMAW Torch for Narrow Gap Welding
7	Badheka V.J & Agrawal S.K	International Journal of Canadian Welding Society. Fall issue 2007	Effect of Welding Variables on Sidewall Fusion of Low Carbon Steel Welded using NG-GMAW Process
8	Badheka V.J & Agrawal S.K	Welding Research Supplement, Australian Welding Journal- Vol. 52, fourth quarter 2007	Cross-tension fracture testing of resistance spot welded galvanized steel sheet
9	Badheka V.J & Agrawal S.K	Australian Welding Journal- Vol. 53, First quarter 2008	Resistance spot welding of High Carbon Steel Strip
10	Badheka V. J & Agrawal S K & Parikh U	Indian Welding Journal of Indian Institute of welding, in July 2007 issue.	Comparative Study of Hot Cracking Susceptibility of AISI 347 Austenitic Stainless Steel (ASS) using Acidic and Basic Coated Filler Material

List of publications in International/National Seminar/conferences;

- 1) **“Mode of Failure of Resistance Spot Welded Martensitic Stainless Steel”** Badheka V J, Agrawal S K and Mr Nandish Shroff; published in the proceeding of International Welding Congress, held at Chennai, 8th to 10th Jan 2008.
- 2) **Narrow Gap MIG Welding of Mild Steel”** Badheka V J; Agrawal S K & Soman S N; Published in Proceedings of the IIW Asian Pacific International Congress, Singapore, 29 Oct. - 1 Nov. 2002, publ. by The Welding Technology Institute of Australia (WTIA), ISBN 0-909539-99-5, vol. ST 3/4, paper No. 44, Document number ICRA-2002-SING-44.
- 3) **Some Considerations in Design and Development of GMAW Torch for Narrow Gap Welding (NG-GMAW)”**; Badheka V J & Agrawal S K; Proc. of the International Welding Congress, organized by The Indian Institute of Welding (IIW), on behalf of The International Institute of Welding (IIW), 16th to 19th Feb 2005, Mumbai. Document number ICRA-2005-IND-120
- 4) **Comparative study of 6 % Cr hard faced deposited by FCAW & SMAW”** Badheka V J & Agrawal S K; Proc of the 56th ATM of Indian Institute of Metals (IIM), 14th to 17th Nov.2002, Baroda
- 5) **Some Experiences with NG-GMAW”** Agrawal S K & Badheka V J; Proc.of National Welding Seminar (NWS)-2003, organized by The Indian Institute of Welding (IIW); 4th - 6th Dec.2003, Baroda.
- 6) **Various Narrow Gap Welding (NGW) Processes for Heavy Fabrication** Badheka V.J & Agrawal S.K; Proc. of National Welding Meet (NWM)-2006, organized by The Indian Institute of Welding (IIW); 2nd Sept.2006, Baroda.
- 7) **Improving the weld penetration by application of oxide coating in GTAW of P91 steel.** Presented at National Welding Seminar 2009-10 held at Kolkata.
- 8) **Development of welding procedures (including FSW) for joining Al-Mg-Si alloy and Al-Mg alloy for marine application.** Presented at National Welding Seminar 2009-10 held at Kolkata
- 9) **In-house Design and Development of Friction Stir Welding setup for Aluminum and Its Alloys.** Presented at National Welding Seminar 2009-10 held at Kolkata
- 10) **Friction Stir Welding in the Transportation Industry**; presented on 2nd Oct 2010 at 12th Foundation Day Seminar, Organized by Indian Institute of Welding, Baroda Branch