**List of Publications**

**Published Book**

1. Ajai Kumar Pathak, Weldability of Ferritic Stainless Steel, LAMBERT Academic publishing, © 2013 OmniScriptum GmbH & Co. KG,

ISBN: 978-3-659-46610-6.

**List of publications in Journal:**

1. M. K. Muju and A. K. Pathak, Abrasive Jet Machining of Glass at Low Temperature, Journal of Mechanical Working Technology, 17, p 325-332, 1988.

2. A. K. Pathak and G. L. Datta, Three Dimensional Finite Element Analysis of Heat Flow in Arc Welding, Indian Welding Journal, 32, p 32-38, 1999.

3. A. K. Pathak and G. L. Datta, 3-D Finite Element Analysis on Heat Flow in Welding Under Varying Arc Length, Indian Welding Journal, 33, p 24-29, 2000.

4. G. L. Datta and A. K. Pathak, Estimation of temperature distribution and cooling rate in arc welding using three-dimensional finite element analysis, Material science forum, V 426-432, p 4099-4104, 2003, Trans Tech Publications.

5. A. K. Pathak and G. L. Datta, Three-dimensional finite element analysis to predict the different zones of microstructure in submerged arc welding, J. Engineering manufacture, Proc. Instn Mech. Engrs, V 218 Part B, p 269-280, 2004.

# 6. A. K. Pathak and G. L. Datta, Study of grain size and microhardness of

# submerged arc welded joint of AISI 1060 steel, Science and Technology of

# Welding and Joining, V 10, N 2, p 139-141, 2005, Institute of Materials.

7. Ajai Kumar Pathak, Some Aspect of Lean Manufacturing, Advanced Materials Research, V 488-489 (2012), p 1142-1146, Trans Tech Publications, Switzerland.

8. Ajai Kumar Pathak, Weldability of Ferritic Stainless Steel, Journal of Materials and Metallurgical Engineering, volume 2, Issue 3, 2012, p 59-68, STM Journal.

9. A. K. Pathak, Onurabh Mallick, Md Razaullah Khan, Experimental Study of MIG Welding Welded Joints of AA6101T6, Journal of Machining and Forming Technologies, Vol 6, No 3-4, © 2015 Nova Science Publishers, Inc . p 169-178

10. Ajai Kumar Pathak, Binod Kumar, Ashish Kumar Shukla, Md. Razaullah

Khan, Study of Corrosion Behaviour of Ferritic Stainless Steel Welded Joint, International Journal of Engineering and Management Research, volume 5, issue-6, December-2015, p 289-293.

11. Md. Razaullah Khan, A. K. Pathak, Umasankar Das and Dhirendra Tiwari, Study of Microstructure and Mechanical Properties of Ferritic Stainless Steel (AISI 430) Weldment using ER309L and ER430 Electrodes by MIG Welding Process, International Journal of Engineering Research & Technology (IJERT), Vol. 5, Issue 01, 2016, p 312 – 318.

1. Md Razaullah Khan, A. K. Pathak and Nishant Navin, Practical Investigation of Weldment of FSS (AISI 430) Welded by TIG Welding Process, International Journal of Engineering and Management Research, v-7, issue-1, 2017, pp 39-44
2. Jince P Mathew, Dr. Binod Kumar, Dr. A. K. Pathak, and Razaullah Khan, Study of Corrosion Behavior of Tig and Mig Welded Joints of Ferritic Stainless Steel (FSS) (Aisi-430) in Different Environments, International Journal of Innovative Research in Science, Engineering and Technology, vol. 6, Issue 3, March 2017, pp. 3270-3285.
3. Md. Razaullah Khan and A. K. Pathak, Practical Investigation of Weldment of FSS Welded by MIG Welding Process, **Advanced Science, Engineering and Medicine,** vol. 10, 2018, pp. 313–317.

**Research papers presented in conference:**

1. A. K. Pathak and G. L. Datta, Three Dimensional Finite Element Analysis on Heat Flow in Welding Under Varying Arc Lengths, Symposium on Joining of Materials 20-22 January 2000, Tiruchirappalli, India, WM 14, p 24-29.

2. A. K. Pathak, An Experimental Investigation into Low Temperature Machining of Mild Steel, Proceedings of the Second International Conference on Advanced Manufacturing Technology, Johor, Malaysia, August 16 - 17 2000, p 203-208.

3. A. K. Pathak and G. L. Datta, Mathematical Modelling of Arc Welding – A Review, Part 1, International Welding Symposium on Emerging Trends in Welding, 22-23, February 2003, Hyderabad, p245-258.

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5. A. K. Pathak and G. L. Datta, Theoretical Prediction of Microstructure of AISI 1060 Steel Welded Joint Based on TTT Diagram, Modelling of Casting, Welding and Advanced Solidification Processes – XI (Proceedings from the Eleventh International Conference on Modelling of Casting, Welding and Advanced Solidification Processes, held at Club Med, Opio, France on May 28 - June 2, 2006, Edited by Charles-Andre Gandin and Michel Bellet, A publication of TMS (The Minerals, Metals & Materials Society), p 871-878.

6. Ajai Kumar Pathak, Weld decay in Austenitic Stainless Steel, Paper no 24 presented in National Welding Seminar, Organised by The Indian Institute of Welding from 04 to 06 February 2009 in Mumbai.

7. A. K. Pathak, Prevention of Weld Decay in Austenitic Stainless Steel Using Grain Boundary Engineering, National Seminar on Advances in Materials Technology, 5-6 March 2009, NIFFT, Hatia, .Ranchi, p55-66.

8. S. B. Kumar, A. K. Pathak and S. N. Sinha, Role of industry in technical education, National seminar on academic institutes-industries interaction, 24-25 September, 2011, p 261-263.

9. Pathak A. K., Majhi Abinash and Kumar P. Satish, Welding of Cast Iron using Nickel Electrode, Proceedings of the 4th International and 25th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2012) , December 14-16, 2012, Jadavpur University, Kolkata, India, Vol. 1, p 92-95.

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11. Ajai Kumar Pathak, Md Salim Ansari and Md Razaullah Khan, Comparison of microstructure and mechanical properties of austenitic stainless steel welded joints by SMAW and MIG welding, International Conference on Metallurgical and Materials Processes, Products and Applications, January 8-10, 2014, O. P. Jindal Institute of Technology, Raigarh 1.

12. Ajai Kumar Pathak, Kumar Ashoka Nand, Md Salim Ansari, and Md Razaullah Khan, Experimental study of microstructure and mechanical properties of gray cast iron welded joint using Est and nickel electrode, Proceedings of IIW International Congress 2014 (IC 2014), 9-11 April 2014, New Delhi, India, pp 303-309.

13. Ajai Kumar Pathak, Md Salim Ansari and Md Razaullah Khan, Experimental study of weldability of stainless steel using SMAW and MIG Welding, Proceedings of 3rd International Conference on Welding Technologies and Exhibition (ICWET 14) held on May 21-23, 2014 at Celal Bayer University, Manisa, Turkey, pp 115-125.

14. Onurabh Mallick, A. K. Pathak, Md. Razaullah Khan, Study of Process Parameters on the Properties of Weldment of AA6101T6, Proceedings of International Conference on Industrial, Mechanical and Production Engineering: Advancements and Current Trends (IC IMPACT 2014), Vo. I, November, 27-29, 2014, MANIT Bhopal, pp 115-120.

15. Md. Razaullah Khan, Dr. A. K. Pathak, Satyendra Kumar Burnwal, Comparative Study of Weldments of AISI 430 Ferritic Stainless Steel using TIG and MIG Welding Processes, National Welding Seminar 2014-15, 22-24 January 2015, Jamshedpur, Organized by IIW and TATA Steel.

16. A. K. Pathak, Razaullah Khan and Dhirendra Tiwari, Study of Microstructure and Mechanical Properties of Feritic Stainless Steel (AISI 430) Weldment using ER309L and ER430 electrodes, Proceeding of National Welding Seminar 9-11 Dec 2015, CIDCO, Vashi, Navi Mumbai, Organised by The Indian Institute of Welding.

17. Ajai Kumar Pathak, Ravi Pratap Singh Pal, Razaullah Khan, Investigation of Weldability of Aluminium (AI6063T6) using Pulse MIG Welding, Proceedings of 10th International Conference on Trends in Welding Research & 9th International Welding Symposium of Japan Welding Society (9WS), October 11-14, 2016, Hitotsubashi Hall, Tokyo, Japan, p 309.

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19. Ajai Kumar Pathak, Ravi Pratap Singh Pal, Razaullah Khan, Investigation of Weldability of Al6063t6 Using Single Pulse and Double Pulse MIG Welding, Proceedings of 6th International and 27th All India Manufacturing Technology, Design and Research Conference AIMTDR 2016, College of Engineering, Pune, 16-18 December 2016, pp 1029-1033.

20. Md Razaullah Khan and A. K. Pathak, Investigation of Properties of Ferritic Stainless Steel (AISI 430) Weldments Welded by TIG Welding, Proceedings of the International Conference on Advances in Materials and Manufacturing (ICAMM’17) NIFFT, Ranchi, January 19-21, 2017, pp 105-108, (ISBN: 978-93-86256-36-2).

21. Md Razaullah Khan and A. K. Pathak, Practical Investigation of Weldment of

FSS Welded by MIG Welding Process, Second International Conference on

Mechanical and Manufacturing Engineering (ICMME – 2017), Organized by the Department of Manufacturing Engineering, SCSVMV University, Kanchipuram, on 6th and 7th April 2017.

22. Md Razaullah Khan,A. K. Pathak and Sree Harsha Ch, Experimental and

Theoretical Thermal Analysis of FSS (AISI 430) Weldment using ANSYS, Proceedings of International Congress 2017, 7-9 December 2017, Chennai Trade centre, Chennai, pp 72-79.

**Conference and Symposium Attended without paper**

1. Fourth SERC School on micro fabrication and micromachining processes, April 5th 10th 2010, Production Engineering Department, Jadavpur University.
2. Energy Conservation Conclave 2012, January 14-15, 2012 organised by The Institute of Indian Foundrymen, Ranchi chapter, held at NIFFT, Hatia, Ranchi.
3. National Symposium on Miniature Manufacturing in 21st Century (NSMMIC – 2013), August 16 – 18, 2013, organized by Department of Mechanical Engineering, IIT (BHU), Varanasi.
4. The 2014 Look East Steel Conference, March 9th, 2014, Hotel Radisson Blu, Ranchi, Organised by The Institute of Indian Founrymen Eastern Region and Ranchi Chapter.
5. Seminar on Human Resource for Metal Component Manufacturing (HRMCM’16), March 10-11, 2016, NIFFT, Hatia, Ranchi.
6. National Conference on Emerging Technologies in Foundry and Forge (NCETFF-2016), November 25-26, 2016, Foundry Technology Department and Forge Technology Department, NIFFT, Hatia, Ranchi.
7. National Conference on Advances in Structural Materials, December 16-17, 2016, Department of Materials and Metallurgical Engineering, NIFFT, Hatia, Ranchi.