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Dr. Sachin Sirohi

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Education

Ph. D	Mechanical Engineering	SRM Institute of Science and Technology (formerly known as SRM University), Kattankulathur, 2022
M.Tech	Thermal Engineering	Teerthankar Mahaveer University, Moradabad, 2013
B.Tech	Mechanical Engineering	Uttar Pradesh Technical University, Lucknow, 2009

Selected Publications

2025

- Amit Kumar, Krishna Guguloth, Shailesh M Pandey, **Sachin Sirohi**, Aleksandra Świerczyńska, Dariusz Fydrych, Chandan Pandey, "Microstructure degradation and creep failure study of the dissimilar metal welded joint of heat resistant steel and Inconel 617 alloy tested at 6500C and applied stress range 100-150MPa" International Journal of Pressure Vessel and Piping, Vol 214,. Q1, SCI INDEXED, I.F 3.0
- Ravinder Kumar, **Sachin Sirohi**, "Microstructure and Mechanical behavior study of the GTAW joint AISI 310 and modified 9Cr-1Mo (P91) steel, "Journal of Material Engineering and Performance, PP 1-19 Q1, SCI INDEXED, I.F 2.2
- **Sachin Sirohi**, Amit Kumar, Manohar Singh, Dariusz Fydrych, Chandan Pandey, "Pulsed GTAW joint P92 steel and Inconel 625: microstructure and mechanical properties, "Archives of Civil and Mechanical Engineering, Vol 25 (2),. Q1, SCI INDEXED, I.F 4.4
- Dudekula Moulali, Amit Kumar, Krishna Guguloth, **Sachin Sirohi**, Chandra Shakher Tyagi, H Natu, Chandan Pandey, "Laser welding on 10 mm thick grade 92 steel for USC application: Microstructure and mechanical properties, "Archives of Civil and Mechanical Engineering, Vol 25 (2),. Q1, SCI INDEXED, I.F 4.4

2024

- Hardik Sanjay Surkar, Amit Kumar, **Sachin Sirohi**, Shailesh M Pandey, Aleksandra Świerczyńska, Dariusz Fydrych, Chandan Pandey, "A dissimilar welded joint of grade 92 steel and AISI 304L steel obtained using IN82 buttering and IN617 filler: relationship of microstructure and mechanical properties" Archives of Civil and Mechanical Engineering, Vol 24 (2),. Q1, SCI INDEXED, I.F 4.4
- Gaurav Dak, Krishna Guguloth, **Sachin Sirohi**, Mehmet Şükrü Adin, Chandan Pandey "Creep and high temperature tensile deformation behavior of the TIG welded P92/304L dissimilar steel weld joints" Journal of Material Engineering and Performance. Q1, SCI INDEXED, I.F 2.2
- R Saravanakumar, T Rajasekaran, Shailes Mani Pandey, **Sachin Sirohi**, Chandan Pandey "Effects of welding parameter on the microstructure and mechanical properties of friction stir welded non heat treatable alloy AA5083" Journal of Adhesion Science and Technology. Q2, SCI INDEXED, I.F 2.7
- R Saravanakumar, **Sachin Sirohi**, Shailesh M Pandey, T Rajasekaran, Chandan Pandey "Attributes of FSW and UWFSW butt joints of armour grade AA5083 aluminium alloy: Impact of tool pin profile" Journal of Heliyon. Q2, SCI INDEXED, I.F 3.4
- Saurabh Rathore, Amit Kumar, **Sachin Sirohi**, Shailesh M Pandey, Ankur Gupta, Dariusz Fydrych, Chandan Pandey, "Advanced ultra super critical power plants: role of buttering layer" International Journal of Advanced Manufacturing Technology, Vol 134 (11),. Q1, SCI INDEXED, I.F 4.4
- Niraj Kumar, Prakash Kumar, **Sachin Sirohi**, Shailesh M Pandey, Chandan Pandey, "Microstructure and mechanical investigation of dissimilar U-groove weld of IN718/ASS 304L employing ERNiCr-3 filler" Journal of Adhesion Science and Technology, PP1-18, SCI INDEXED, I.F 2.7
- Amit Kumar, Kalpna Gupta, Preeti Tiwari, Chandra Shakher Tyagi, **Sachin Sirohi**, Chandan Pandey "Study on the effect of varying cooling conditions on microstructural and mechanical performance of the GTAW joint of heat resistant P92 steel" Journal of Material Engineering and Performance. Q1, SCI INDEXED, I.F 2.2
- Amit Kumar, Krishna Guguloth, Shailesh M Pandey, **Sachin Sirohi**, Aleksandra Świerczyńska, Dariusz Fydrych, Chandan Pandey, "Microstructure degradation and creep failure study of the dissimilar metal welded joint of heat-resistant steel and Inconel 617 alloy tested at 650 OC and applied stress range of 100-150 MPa" International journal of pressure vessel and piping. Vol. 214 PP 105370, Q1, SCI INDEXED, I.F 3
- Amit Kumar, **Sachin Sirohi**, Manohar Singh, Dariusz Fydrych, Chandan Pandey, "Microstructure and mechanical properties of dissimilar metal welded joint of Inconel 617 and P92 steel with Inconel 82 buttering layer for AUSC boiler application" International journal of pressure vessel and piping. Q1, SCI INDEXED, I.F 3
- Saurabh Rathore, Amit Kumar, **Sachin Sirohi**, Vivek Singh, Ankur Gupta, Dariusz Fydrych, Chandan Pandey, "Role of buttering layer composition on microstructure heterogeneity and mechanical properties of alloy 617 and P92 steel dissimilar welded joints for future Indian AUSC program" International journal of advanced manufacturing technology, Q1, SCI INDEXED, I.F 3.4

2023

- Amit Kumar, Shailesh Mani Pandey, Abir Bhattacharya, Dariusz Fydrych, **Sachin Sirohi**, Chandan Pandey, Pandey "Selection of electrode material for Inconel 617/P92 steels dissimilar welds ", Journal of pressure vessel and piping technology, ASME (Accepted) SCI INDEXED, I.F 1.051
- Partha Sarathi Sahoo, Manas Mohan Mahapatra, Pandu Ranga Vundavilli, Rama Krushna

- Sabat, **Sachin Sirohi**, Sanjeev Kumar "Investigation of Severe Plastic Deformation Effects On Magnesium RZ5 Alloy Sheets Using a Modified Multi-Pass Equal Channel Angular Pressing (ECAP) Technique" Journal of Materials. SCI INDEXED, I.F 3.4
- Amit Kumar, Krishna Guguloth, Shailesh M. Pandey, Dariusz Fydrych, **Sachin Sirohi**, Chandan Pandey, "Study on Microstructure-Property Relationship of Inconel 617 Alloy/304LSS Steel Dissimilar Welds Joint" Journal of Metallurgical and Materials Transactions A. SCI INDEXED, I.F 2.8
- **Sachin Sirohi**, Sanjeev Kumar, Naveen Kumar, Amit Kumar, Shailesh M Pandey, Adhithan Balamurugan, Fydrych, Dariusz, Chandan Pandey "Metallurgical characterization and high-temperature tensile failure of Inconel 617 alloy welded by GTAW and SMAW- A comparative study", Part L: Journal of Materials: Design and Applications. SCI INDEXED, I.F 2.663

2022

- **Sachin Sirohi**, Shailesh M Pandey, Aleksandra Świerczyńska, Grzegorz Rogalski, Naveen Kumar, Michał Landowski, Dariusz Fydrych, Chandan Pandey, Microstructure and mechanical properties of combined GTAW and SMAW dissimilar welded joints between Inconel 718 and 304L austenitic stainless steel, Journal of metals, pp14, Vol. 13(1), 2023. <https://doi.org/10.3390/met13010014>, SCI INDEXED, I.F 2.695
- **Sachin Sirohi**, Shailesh M Pandey, V Tiwari, Dhowmya Bhatt, Dariusz Fydrych, Chandan Pandey, Impact of laser beam welding on mechanical behavior of 2.25 Cr-1Mo (P22) steel, International Journal of pressure vessel and piping, pp104867, Vol. 201, 2022. <https://doi.org/10.1016/j.ijpvp.2022.104867>, SCI INDEXED, I.F 2.56
- Sanjeev Kumar, **Sachin Sirohi**, Shailesh M Pandey, Dhowmya Bhatt, Chandan Pandey, Effect of single bevel groove geometry on the impact strength of dissimilar welded joint of P2 and P91 steel, Journal of Sustainability, pp11739, Vol. 14, 2022. <https://doi.org/10.3390/su141811739>, SCI INDEXED, I.F 3.8
- **S Sirohi**, A Sauraw, A Kumar, S Kumar, T Rajasekaran, P Kumar, RS Vidyarthi, N Kumar, C Pandey, Characterization of microstructure and mechanical properties of Cr-Mo grade P22/P91 steel dissimilar welds for supercritical power plant application, Journal of materials Engineering and performance, pp7353-7367, Vol.31, 2022. <https://doi.org/10.1007/s11665-022-06747-y>, SCI INDEXED, I.F 1.8
- Sachin Sirohi, Amit Kumar, Shiva Soni, Gaurav Dak, Sanjeev Kumar, Aleksandra Świerczyńska, Grzegorz Rogalski, Dariusz Fydrych, Chandan Pandey, Influence of PWHT parameters on the mechanical properties and microstructural behavior of multi-pass GTAW joints of P92 steel, Materials, pp4045, Vol. 15(12), 2022. <https://doi.org/10.3390/ma15124045>, SCI INDEXED, I.F 3.623
- C Pandey, Naveen Kumar, S Sirohi, T Rajasekaran, S Kumar, P Kumar, Study on the effect of the grain refinement on mechanical properties of the P92 welded joint, Journal of materials engineering and performance, pp4385-4404, Vol. 31, 2022. <https://doi.org/10.1007/s11665-021-06536-z>, SCI INDEXED, I.F 1.8
- Gaurav Dak, Sachin Sirohi, Chandan Pandey, Study on microstructure and mechanical behavior relationship for laser-welded dissimilar joint of P92 martensitic and 304L austenitic steel, International journal of pressure vessel and piping, pp104629, Vol. 196, 2022. <https://doi.org/10.1016/j.ijpvp.2022.104629>, SCI INDEXED, I.F 2.56

2021

- S. Sirohi, P.K. Taraphdar, G. dak, C. Pandey, S.K. Sharma, A. Goyal, "Study on evaluation of through thickness residual stresses and microstructure mechanical property relation for dissimilar welded joint of modified 9Cr-1Mo and SS 304H steel" International Journal of Pressure Vessel and Piping, pp104557, Vol. 194, 2021. <https://doi.org/10.1016/j.ijpvp.2021.104557>, SCI INDEXED, I.F 2.56

- S Sirohi, S Kumar, V Bhanu, C Pandey, A Gupta, Study on the variation in mechanical properties along dissimilar weldments of P22 and P91 steel, *Journal of material engineering and performance*, pp2281-2296, Vol. 31, 2021. <https://doi.org/10.1007/s11665-021-06306-x>, SCI INDEXED, I.F 1.8
- S Sirohi, A Gupta, C Pandey, RS Vidyarthi, K Guguloth, H Natu, Investigation of the microstructure and mechanical properties of the laser welded joint of P22 and P91 steel, *Optics and laser technology*, pp107610, Vol. 147, 2021. <https://doi.org/10.1016/j.optlastec.2021.107610>, SCI INDEXED, I.F 4.939
- Sarbesh Kumar, Sachin Sirohi, RS Vidyarthi, Ankur Gupta, Chandan Pandey, Role of the Ni-based filler composition on microstructure and mechanical behavior of the dissimilar welded joint of P22 and P91 steel, *International Journal of pressure vessel and piping*, pp104473, Vol. 193, 2021. <https://doi.org/10.1016/j.ijpvp.2021.104473>, SCI INDEXED, I.F 2.56
- S. Sirohi, C. Pandey, A. Goyal, Role of the Ni-based filler (IN625) and heat-treatment on the mechanical performance of the GTA welded dissimilar joint of P91 and SS304H steel, *Journal of Manufacturing Processes*, pp174-189, Vol. 65, 2021. <https://doi.org/10.1016/j.jmapro.2021.03.029>, SCI INDEXED, I.F 5.684
- Anupam Sauraw, Atul Kumar Sharma, Dariusz Fydrych, Sachin Sirohi, Ankur Gupta, Aleksandra Świerczyńska, Chandan Pandey, Grzegorz Rogalski, Study on microstructural characterization, mechanical properties and residual stress of GTAW dissimilar joints of P91 and P22 steels, *Materials*, pp6591, Vol. 14(21), 2021. <https://doi.org/10.3390/ma14216591>, SCI INDEXED, I.F 3.626
- C Pandey, JG Thakare, P Tharaphadar, P Kumar, A Gupta, S Sirohi, Characterization of the soft zone in dissimilar welds joint of 2.25Cr-1Mo and lean duplex LDX2101 steel. *Journal of Fusion Engineering and Design*, pp112147, Vol. 163, 2021. <https://doi.org/10.1016/j.fusengdes.2020.112147>, SCI INDEXED, I.F 1.905

2020

- S. Sirohi, C. Pandey, A. Goyal " Role of heat-treatment and filler on structure-property relationship of dissimilar welded joint of P22 and F69 steel, *Fusion Engineering and Design*, pp111935, Vol. 159, 2020. <https://doi.org/10.1016/j.fusengdes.2020.111935>
- S. Sirohi, C. Pandey, A comparative study of two nuclear steel grades welded joints, *Archives of Metallurgy and Materials*, pp 583-593, Vol. 65 2020. <https://doi.org/10.24425/amm.2020.132796>
- S. Sirohi, C. Pandey, A. Goyal "Characterization of structure property relationship of martensitic P91 and high alloy ferritic austenitic F69 steel", *International Journal of Pressure Vessels and Piping*, pp 104179, Vol. 188, 2020,

2019

- C. Pandey, S. Sirohi, M. M. Mahapatra, P. Kumar, Role of heat treatment on grain refinement and microhardness of 9Cr-1Mo-V-Nb steel, *Metallographic and Microstructure Analysis*, pp 472- 478, Vol. 8(4), 2019. <https://doi.org/10.1007/s13632-019-00555-y>, SCOPUS INDEXED,

2018

- C. Pandey, M. M. Mahapatra, P. Kumar, S. Kumar, S. Sirohi, Effect of post weld heat treatment on microstructure evolution and type IV cracking behaviour of the P91 steel welds joint, *Journal of Material Processing Technology* 266, pp 140-154, Vol. 266, 2018. <https://doi.org/10.1016/j.jmatprotec.2018.10.024>, SCI INDEXED, I.F 6.162

- C. Pandey, M. M. Mahapatra, P. Kumar, S. Sirohi, Fracture behaviour of the crept P91 welded sample for different post weld heat treatments condition, Engineering Failure Analysis, pp 18-29, Vol. 95, 2018. <https://doi.org/10.1016/j.engfailanal.2018.08.029>, SCI INDEXED, I.F 3.634

Papers Presented:

- Sachin Sirohi, Sanjeev Kumar, Amit Kumar, Ashish Kumar, Chandan Pandey, To Investigate the effect of process parameters on the dissimilar welded joint of AA7075 and Cu, 2023. <https://doi.org/10.1016/j.matpr.2023.01.009>
- Gyander Ghangas, Vikas Goyat, Sachin Sirohi, Satish Kumar Sharma, Sunil Dhull, Investigation for mechanical properties of dissimilar friction stir welded joints of AA5083 and pure Cu, Material today proceedings, pp77-81, Vol. 56, 2022. <https://doi.org/10.1016/j.matpr.2021.12.163>
- S. Sirohi, C. Pandey, A. Goyal " Brief study on delta ferrite characterization: A review. "Journal Material Today Proceeding, pp1367-1371, Vol. 50, 2022. <https://doi.org/10.1016/j.matpr.2021.08.28020>
- S Sirohi, P Kumar, A Gupta, S Kumar, C Pandey " Role of Ni-based filler on charpy impact toughness of the P91 welds joint" Material Today Proceeding, pp 1043-1049, Vol. 44, 2021. <https://doi.org/10.1016/j.matpr.2020.11.177>
- Vikas Goyat, Gyander Ghangas, Sachin Sirohi, Ajay Kumar, Jagdeep Nain, A review on mechanical properties of coir-based composites, Material today proceedings, pp1738-1745, Vol. 62, 2022. <https://doi.org/10.1016/j.matpr.2021.12.252>
- S. Sirohi, C. Pandey, A. Goyal " A brief study on the heterogeneity of the P91 welded joint. Advanced in Materials Science and Engineering, pp 1-10, 2020. https://doi.org/10.1007/978-981-15-4059-2_1
- S.Kumar, S. Sirohi, B. Adhithan, J.G.Thakare, C. Pandey " Role of Mo in the nucleation of intermetallic laves phase" Journal Material Today Proceeding, pp 2781-2791, Vol. 38, 2020. <https://doi.org/10.1016/j.matpr.2020.08.734>
- Sachin Sirohi, Sanjeev Kumar, Chandan Pandey, " Characterization of damage in thermal barrier coating under different thermal cycle ". Journal Material Today Proceeding, pp 2110-2116, Vol. 38, 2020. <https://doi.org/10.1016/j.matpr.2020.04.539>
- Sachin Sirohi, PK Taraphdar, Prakash Kumar, Chandan Pandey, A study on residual stress distribution in welded joint of P91 and SS304H steel plate, Recent Advances in manufacturing processes and system pp1-10,2022. https://doi.org/10.1007/978-981-16-7787-8_1

Achievements and Awards

- Served as full time Associate Editor in the esteemed journal "**Advances in Material Science**", 2023- till date (Scopus) **Impact factor 1.2**
- Served as full time Associate Editor in the esteemed journal "**Journal of Material Science and Engineering-A**", 2024- till date. (SCIE) **Impact factor 6.2**
- Guest Editor of " **Journal of Material Today Communication (MTC)**" in 2025 for the special issue " Advances approaches in dissimilar welding".(SCIE) **Impact factor 4.5**
- Guest Editor of " **Journal of Materials Engineering Performance (JMEP)**" in 2024 for the special issue " Advances in Dissimilar Welding: Integrating Computational Techniques for Enhanced Joint Performance".(SCIE) **Impact factor 2.2**
- Guest Editor of " **Journal of Nuclear Engineering and Radiation Science**" in 2024 for the special issue " Advances in dissimilar joining in the Nuclear Engineering". (SCIE) **Impact factor 0.8**

Memberships

International Association of Engineers, 2019

ICSES, 2019

IAENG 2022