CURRICULUM VITAE

Mayur Pratap Singh

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Fields of Research Interest

- Mechanical and Metallurgical characterization of low carbon high strength steels, ultra low carbon steels and API grade pipeline steels, Naval grade steels.
- Dilatometry analysis, Gleeble Simulation of sub zones of Heat affected zone (HAZ),
- Thermal modeling of welding behavior of single and multipass welds
- Fracture toughness analysis of welded joints using CT and SENB specimens, fatigue crack growth rate (FCGR), dynamic fracture toughness analysis using Charpy size specimens
- Metallurgical characterization of real welded and Gleeble simulated samples using SEM, TEM, XRD and EBSD spectroscopic techniques.

ACADEMIC QUALIFICATIONS

PhD	Department of Mechanical engineering, National Institute of Technology, Jalandhar (2015-2021) Full Time Thesis title- Experimental investigation of mechanical and metallurgical behavior of SAW welded X80 pipeline steels
M.Tech	Department of Mechanical engineering, National Institute of Technology, Jalandhar (2012-2014) Full Time, 7.7 CGPA Thesis title – Computational Fluid Dynamics analysis of natural convection inside a 2D refrigerated cavity
B.Tech	Department of Mechanical Engineering, College of Engineering and Technology, Moradabad (UPTU) Lucknow (2004-2008), 70%
Higher Secondary	M.Q. Inter College, Seohara, Bijnor, 2004, 66 %, UP Board (First Division)

Secondary SVM Inter College, Noorpur, Bijnor, 2002, 62%, UP Board (First Division)

Present Position

Assistant Professor- Department of Mechanical engineering, Bhagwant Institute of Technology, Muzaffarnagar, UP (Oct 2021-).

Professional Experience

Position	Institution/Organization	Date of joining	Date of leaving
R&D Engineer	Birla Power solutions Limited, Dehradun, Uttrakhand	01/08/2008	12/09/2009
Assistant Professor	MIT group of Institutions, Moradabad (UP)	20/09/2009	21/09/2011
Assistant Professor	RVIT, Bijnor (UP)	01/07/2014	20/07/2015

Experience in Research

- Research in National Metallurgical Laboratory, Jamshedpur, Jharkhand - Worked as Research associate during doctoral programme
- Research in Tata Steels, Jamshedpur, Jharkhand - Worked as Research Associate in doctoral programme
- Research in National Institute of Technology, Jalandhar, Punjab – Worked as Doctoral research fellow in the Department of Mechanical engineering
- Research in National Institute of Technology, Jalandhar, Punjab – Worked as Post graduate research fellow in the Department of Mechanical engineering

Member of Scientific/Professional Bodies

1. Member of Indian welding society, Delhi, India
2. Member of Elpis analytics, India

Reviewer of Journals

1. International journal of structural Integrity, Emerald Publication house
2. World journal of engineering, Emerald publication house
3. Proceedings of the Institution of Mechanical engineers, Part L, Sage Publication house
4. Material research express- IOP sciences

List of Publications

Journal Papers

1. **Singh, M.P**., Arora, K.S., Shajan, N., Pandu, S.R., Shome, M., Kumar, R. and Shukla, D., 2019. Comparative analysis of continuous cooling transformation behavior in CGHAZ of API X-80 and X-65 line pipe steels. ***Journal of Thermal Analysis and Calorimetry***, *137*(4), pp.1155-1167.
2. **Singh, M**., Kumar, R., Shukla, D.K. and Arora, K.S., 2018. Phase transformation and impact

toughness in HAZ of micro alloyed X80 line pipe steel. ***Materials Research Express***, *6*(2), p.026561.

3. **Singh, M.P**., Arora, K.S., Kumar, R., Shukla, D.K. and Siva Prasad, S., 2021. Influence of heat input on microstructure and fracture toughness property in different zones of X80 pipeline steel weldments. ***Fatigue & Fracture of Engineering Materials & Structures***, *44*(1), pp.85-100.
4. **Singh, M.P**., Shukla, D.K., Kumar, R. and Arora, K.S., 2020. The structural integrity of high-strength welded pipeline steels: A review. ***International Journal of Structural Integrity***.
5. **Singh, M.P**., Meena, P.K., Arora, K.S., Kumar, R. and Shukla, D.K., 2021. Experimental, analytical and numerical, investigation of peak temperature and cooling rate in butt joint weld of mild steel. ***World Journal of Engineering***.
6. **Singh, M.P**., Arora, K.S., Gupta, A., Kumar, R., Shukla, D.K. and Jhunjhunwala, P., 2022. Experimental characterization of dynamic fracture toughness behavior of X80 pipeline steel welded joints for different heat inputs. ***Welding in the World***, pp.1-20.
7. Meena, P., Kumar, M., **Singh, M**., Kumar Shukla, D., Burela, R.G., Jhunjhunwala, P., Gupta, A. and Pandey, C., 2022. Numerical Analysis of Different SUS304 Steel Weld Joint Configurations Using new Prescribed Temperature Approach. ***Transactions of the Indian Institute of Metals*****,** *75*(6), pp.1649-1668.
8. Khajuria, A., Akhtar, M., Pandey, M.K., **Singh, M.P.,** Raina, A., Bedi, R. and Singh, B., 2019. Influence of ceramic Al2O3 particulates on performance measures and surface characteristics during sinker EDM of stir cast AMMCs. ***World Journal of Engineering***, *16*(4), pp.526-538.
9. The quantitative linear correlations between fracture toughness and impact toughness for API X80 pipeline steel weldments**. Proceedings of the Institution of Mechanical Engineers, Part C** [IF-2.014] (**Final Comments submitted to the journal**)

List of Conference Papers

1. Continuous cooling transformation behavior in the CGHAZ of X80 line pipe steel using a dilatometer. Published in second International Conference proceedings on Advances in Mechanical Engineering ISME 2019, NIT Jalandhar.
2. Effect of size on the fracture toughness behavior of X-80 line pipe steel weldments. Published in second International Conference on Advances in Mechanical Engineering ISME 2019, NIT Jalandhar.

Keynote lecture Delivered

Short term course on Materials applications in Electric vehicles, BIT, Muzaffarnagar, 2021

Thesis Guided

M.Tech Thesis

Thesis Title- Energy and CDM project opportunity in the Bijnor City.

Conferences and Short term courses organized

1. National Conference on Recent trends and future requirements of technical education in India
2. One week national seminar on future of Electric Vehicles in India
3. One week short term course on Intellectual property rights and patent filing

Workshops/Conference/Short term courses attended

1. International Conference on Material science and Engineering organized by NIT Jalandhar, June,11th 2019 under TEQIP-3 programme.
2. 19th ISME conference on Advances in Mechanical Engineering organized by Department of Mechanical engineering, NIT Jalandhar, 20th December 2018
3. Short term course on Material Characterization Techniques, organized by Department of Mechanical engineering, NIT Jalandhar June17th 2019 at NIT Jalandhar
4. National level hands on training cum workshop on Electron Microscopy-why, how and what organized by Institute Instrumentation centre, IIT Roorkee October 19-23 2015
5. Short term course on Advanced Engine Technologies with open ECUS October 15th 2015 at NIT Jalandhar
6. GIAN course on Applied Fatigue and Fracture Mechanics organized by IIT Ropar and MHRD, Govt. of India Ma 16th 2016
7. Symposium on Fatigue, Fracture and Integrity assessment (FFIA-2017) organized by department of Metallurgical and Material engineering, Jadavpur University 2017
8. Short term course on Advances in welding Technology organized by Department of Mechanical Engineering, IIT Delhi and Indian welding society 15th Nov.2017

COMPUTATIONAL SKILLS

ABAQUS software package, Image J analysis software, Thermo Cal analysis software, Mat Lab, J Mat pro analysis software

AWARDS AND ACHIEVEMENTS

1. MHRD scholarship for pursuing Master program at NIT Jalandhar from August 2012 – June 2014
2. MHRD scholarship for pursuing Doctoral program at NIT Jalandhar from August 2015 – Jan 2020.
3. Worked on joint research project of National metallurgical Laboratory and Tata steel Jamshedpur as research associate during doctoral programme worth 50 lacs INR.
4. Qualified GATE- 2011, 2012 Examinations
5. Member of the team assigned for development of 10KVA dual fuel electricity generator for Indian Army at Birla power solutions limited, 2009.

Declaration

I hereby declare that the above mentioned information is correct and I bear the responsibility for the correctness of the above mentioned particulars.

Place- Bijnor, Uttar Pradesh

Date- November, 18, 2022

Mayur Pratap Singh