



DR. JAGDEEP SHARMA
ASSISTANT PROFESSOR
MECHANICAL ENGINEERING DEPARTMENT
GZSCCET, MRSPTU, BATHINDA, PUNJAB, INDIA.
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jagdeepsharma@mrsptu.ac.in

EDUCATION

- 2014- 2019** Ph.D (Doctorate of Philosophy in Mechanical Engineering)
IKG-PTU, Kapurthalla, Punjab, India
Research: To develop the applications of Infrared heating in Ferritic salt bath Nitrocarburizing technique on AISI 1020 low carbon steel.
Supervisor: Prof. Dr. B.S. Sidhu, MRSPTU, Bathinda.
- 2010 –2013** M.Tech (Masters of Production Engineering)
PTU –GZSCET, Bathinda, India
Research: Investigation of effects of Near dry Machining (NDM) using vegetable oil in turning AISI D2 steel.
Supervisor: Prof. Dr. B.S. Sidhu, MRSPTU, Bathinda.
- 2004 –2007** B.Tech (Bachelor of Mechanical Engineering)
Punjab Technical University (M.I.M.I.T.), Malout, India
- 2000 –2003** Diploma (Production & Industrial Engineering)
Government Polytechnic, Bathinda, India

PROFESSIONAL EXPERIENCE

- 2014- current** Assistant professor
Department of Mechanical Engineering
Giani Zail Singh Campus College of Engineering and Technology, Mahraja Ranjit Singh
Punjab Technical University, Bathinda, Punjab, India
- 2013-2014** Lecturer
Department of Mechanical Engineering
Malout Institute of Management & Information Technology, Punjab, India
- 2012** Intern
Department of Automatic Control Engineering.
Institute of Automatic control engg. at Technical University of Munich, Munich, Germany.

- 2010-2012** Lecturer
 Department of Mechanical Engineering
 Guru Teg Bahadur Khalsa Institute of Engineering and Technology, Malout, Punjab,
- 2008-2010** Lecturer
 Department of Mechanical Engineering
 Malout Institute of Management & Information Technology, Punjab, India
- 2008** Lecturer
 Department of Mechanical Engineering
 Punjab Polytechnic, Lalru mandi, Punjab, India
- 2007** Incharge
 Effluent Treatment Plant
 Punjab Agro industries, Mohali.

INDUSTRIAL TRAININGS

- 2006** Mechanical Engineering Trainee
 National Fertilizers Limited, Bathinda, India
- 2005** Industrial Trainee
 Guru Nanak Dev Thermal Plant, Bathinda, India
- 2003** Industrial Trainee
 Escorts Mahle, Patiala, India

PROGRAMMING & COMPUTER SKILLS

- Adept at Computer Aided Designing & Drafting using Solid Works & PRO-E
- Decent Knowledge of Analytical software Minitab
- Origin pro 8
- Proficient in Microsoft Office Applications specifically Microsoft Word, Spreadsheets & Power Point

SUBJECT AREAS

- Industrial Automation
- Manufacturing sciences
- Material Science
- Additive manufacturing
- Mechatronics
- Machine Drawing
- Manufacturing Practices
- Engineering Drawing
- Machine Drawing using CAD

HIGHLIGHTS OF RESEARCH

Researchgate details

- Citations: 222
- H-index: 2
- RG Score 8.94

Google scholar details

- Citations 256
- h-index 3
- i10-index 2

Scopus id 55948252700

Orcid id 0000-0002-6800-6009

INTERNATIONAL AFFILIATIONS/REVIEWER

- Journal of cleaner production (Elsevier) (**Impact factor: 9.297**)

PATENTS

- Development of an infrared furnace for accelerating the Ferritic salt bath nitrocarburizing reactions. (In Pipeline)

RESEARCH AREAS

- Nanotechnology
- Green/ Sustainable/ Lean Manufacturing.
- Heat Treatments
- Non-conventional machining
- Robotics.

RESEARCH PROJECTS

2012: Investigate the relationship between physical stimuli and the sensations and perceptions they affect.

Supervisor: **Professor, Dr. Angelika Peer, Free University of Bolzano, Bolzano, Italy.**

Place: Institute of Automatic Control Engineering, Technical University Munich, Germany

2021: To develop the applications of Radiative Cooling Nanocoatings for Metal cutting tools. (Applied under Marie Curie postdoctoral fellowship) (under evaluation)

Co-Investigator: **Dr. Prof. Jiří J. Klemeš Head SPIL, NETME centre, Brno University of technology**

Place: SPIL, NETME centre, Brno University of technology, Czech Republic

RESEARCH GUIDED

	Student name	Course	Title of the research	year
1.	Harpreet Singh	M.Tech	Comparative analysis of metal working fluids using minimum quantity lubrication turning on EN 19 steel.	2014
2.	Puneet Sharma	M.Tech	Investigation of effects of nanofluids on turning of AISI D2 steel using minimum quantity lubrication	2015
3.	Sukhchain Singh	M.Tech	Modification of EN-8 D steel surface by salt bath nitrocarburizing and postoxidation process.	2016
4.	Ramandeep Singh	M.Tech	Optimization of gas carburizing process parameters for Mechanical properties on AISI 1020 using Taguchi approach.	2016
5.	Hardeep Singh	M.Tech	Investigation of process parameters for Mechanical properties of Gas carburized EN 353 steel.	2017
6.	Kanwal Sarwal	M.Tech	Comparative analysis of Gas, Plasma Nitriding and Carbonitriding on AISI 1018 and AISI 1020 mild steel.	2020 ongoing
7.	Saurav Tiwari	B.Tech	Designing of Sewage evacuation system in Indian trains with the help of PLC”	2012
8.	Avinash Kumar	B.Tech	Applications of nanofluids in a car radiator cooling system.	2013
9.	Rahul Kumar	B.Tech	Development of Alternative material for plastic using banana peel and mullet starch.	2019
10.	Dharampreet Singh	B.Tech	Investigation of mechanical properties of 3D printed HIPS material using various mesh structures.	2020 Ongoing
11.	Pushpinder Singh	B.Tech.	To develop the powered EXoArm for the patients with movement disorders.	2020 Ongoing

LIST OF SELECTIVE PUBLICATIONS

SCI /ESCI PUBLICATIONS

1. **Sharma, J.** and B.S. Sidhu, Investigation of effects of dry and near dry machining on AISI D2 steel using vegetable oil, *Journal of Cleaner Production*, 66 (2014): p. 619-623.
(Impact factor 9.297)
2. Sharma, Puneet, Balwinder Singh Sidhu, and **Jagdeep Sharma**. "Investigation of effects of nanofluids on turning of AISI D2 steel using minimum quantity lubrication." *Journal of cleaner production*, 108 (2015): 72-79.
(Impact factor 9.297)

3. **Sharma, J.** and B.S. Sidhu , R. Gupta, Effects of Arcor Nitrocarburizing Process on the Case Chemistry and Morphology of AISI 1018 Low-Carbon Steel, *Materials Performance and Characterization*, 7, no. 1 (2018): 351-364.
4. **Sharma, Jagdeep,** Balwinder Singh Sidhu, and Rajesh Gupta. "Surface Modification of AISI 1018 Low Carbon Steel by Duplex Treatment of Nitrocarburizing and Post-Oxidation." *Journal of Surface Science and Technology*, 35, no. 1-2 (2019): 77-81.
5. **Sharma, J.** and B.S. Sidhu , R. Gupta, "Development of Applications of Infrared Heating in Ferritic Salt Bath Nitrocarburizing Process." *Materials Performance and Characterization*, 8, no. 1 (2019): 380-388.

OTHER INTERNATIONAL JOURNAL PUBLICATIONS

6. **Sharma, J.,** Sidhu, B.S. and Gupta, R., "Determination of the optimum conditions for salt bath ferritic Nitrocarburizing process of AISI 1018 Steel using ANOVA method". *Journal of Thin Films, Coating Science Technology and Application*, 5(1) (2018) pp.1-7.
7. Sukhchain Singh, **Jagdeep Sharma**: Effect of Nitro carburizing and Post Oxidation on Micro hardness and wear resistance of En-8 Steel; International Journal of Modern Engineering Research. ,Volume 6 Issue 9 September 2016 pp 53-57 ISSN: 2249-6645/2.10
8. Sharma, Jagdeep. "Ferrite salt bath nitrocarburizing process and its various trade names-A review." *Journal of Metallurgy and Materials Science* 60, no. 2 (2018): 63-71.

CONFERENCES

1. **Sharma, J.** and B.S.Sidhu ;Environment friendly machining techniques; **International conference AFTMME 2013**, PTU, Jalandhar
2. **Sharma, J.** and B.S. Sidhu , R. Gupta: Salt bath nitrocarburizing process; a review : **National conference**; latest developments in materials, manufacturing and quality control; 2015,
3. Rajiv kumar, Balwinder Singh, **Jagdeep Sharma** Effect of thermal assisted machining (TAM) on micro-hardness of EN 31steel TEQIP-II Sponsored National Conference on "Latest Developments in Materials, Manufacturing and Quality Control" on 19-20th February, 2015 (ISBN 978-93-5196-055-3) at GZS PTU Campus Bathinda.
4. Balwinder Singh , Sukhchain Singh, **Jagdeep Sharma** "Effect of nitrocarburizing and post oxidation on surface modification of EN-8 Steel" **International Conference** on Latest Developments in Materials, Manufacturing and Quality Control (MMQC-2016) February 12-13, 2016, ISBN No: 978-93-5212-858-7 Organized by Department of Mechanical Engineering, GZS Campus College of Engineering & Technology, Maharaja Ranjit Singh State Technical University, Bathinda.
5. Balwinder Singh, Rajesh Gupta , **Jagdeep Sharma** "Effect of thermal assisted machining (TAM) on Material Removal Rate of EN 31steel" **International Conference** on Latest Developments in Materials, Manufacturing and Quality Control (MMQC-2016) February 12-13, 2016, ISBN No: 978-93-5212-858-7 Organized by Department of Mechanical Engineering, GZS Campus College of Engineering & Technology, Maharaja Ranjit Singh State Technical University, Bathinda.

PAPERS PRESENTED

- *Latest developments in material, manufacturing and quality control TEQUP-II sponsored national conference (19-20 February 2015)*

STTP COORDINATED

- *Enhancing Research Capabilities and Technical Education* " (8th to 13th February 2021)

Sponsored by AICTE, New Delhi.

FDP ATTENDED

- ***Recent advancements in Materials and Manufacturing***” (25 to 30 January 2021) *Sponsored by AICTE, New Delhi.*
- ***ATAL FDP on “Molecular Manufacturing”*** (23 -27th November, 2020) Sponsored by AICTE, New Delhi.
- ***Recent trends in Automobile engineering through ICT*** (16-20 March 2015) recognized by AICTE, New Delhi.
- ***Advanced research in Material, Manufacturing and Mechanical engineering*** (27-31 October, 2014 sponsored by TEQUIP-II.
- ***Network Security and Firewall*** (21 April- 02 May 2014) By NITTTR, Chandigarh.
- ***FDP*** Sponsored by DST New Delhi and EDI-I Ahmedabad 2012
- ***Mechatronics*** (25-29 July 2011) by NITTTR, Chandigarh.
- ***CAD using Pro-engineer*** (14-18 July 2008) by NITTTR, Chandigarh

PERSONAL INFORMATION

- **Name** **Jagdeep Sharma**
- **D.o.B** **27/05/1983**
- **Sex:** **Male**
- **Nationality:** **Indian**
- **Permanent address:** House no. 28868, Street no. 2-D, Partap nagar, Bathinda, Punjab, India. 151001

REFERENCES:

Sr. no.	Name	Designation	Address	Contact Details
1	Dr. Balwinder Singh	Professor	Giani Zail Singh Campus College of Engineering & Technology, Bathinda, Punjab, India	drbwssidhu07@gmail.com 9463936756
2	Dr. Rajesh Gupta	Professor	Giani Zail Singh Campus College of Engineering & Technology, Bathinda, Punjab, India	rg91@rediffmail.com 8872500261
3.	Dr. Angelika Peer	Professor	Free University of Bolzano, Bolzano, Italy.	angelika.peer@unibz.it +39 0471 017766
4.	Dr. Prof. Jiří J. Klemes	Professor	Brno University of technology, Czech Republic	klemes@fme.vutbr.cz +420 731140547