

# CURRICULUM-VITAE

**Professor**

**MRS PTU Bathinda.**

1. **Name** : **Dr. Balwinder Singh**



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2. **Educational Qualification** : Ph. D. (Indian Institute of Technology, Roorkee)

3 **Experience.** **26 years 9 months.**

4 **Publications.** **Conference 83 + Journals 32.**

5 **Patents.** **One Applied.**

6. **Professional Memberships.** Life member LM – Indian Society for Technical education (LM-26208)

Life member LM – Indian Society for Mechanical Engineers (L-1177), FIE – Institution of Engineers (India) (F-118728-3) Chartered Engineer [India] F-1187283

Life Member Society of Materials and Mechanical Engineers (SOMME LM-10024)

Member of Academic Council MRSPTU Bathinda and SBSSTC Ferozepur

7. **Conferences/Refresher Course organized:**

- (i) Organized National Level NSS Training & Orientation/ Refresher Course as NSS Programmer Officer on November 17-26, 2003 at GZS College of Engineering and Technology, Bathinda.
- (ii) Organized College Level Technical & Cultural Programme **Soul Mech 08, Mechkrigers 2009 and MECHCEASARS' 11 under Mechnoclique (A Society of Mechanical Engg. Students)** at GZS College of Engineering and Technology, Bathinda
- (iii) Organized One Week Faculty Development Program (Short Term Course) on "Recent Trends in Materials, Manufacturing and Safety" held on 02-06 December, 2013 at Department of Mechanical Engineering GZS PTU Campus Bathinda.
- (iv) **National Conference on Latest Developments in Materials, Manufacturing and Quality Control is organized to be held on 13-14 February, 2014**
- (v) Organized One Week Faculty Development Program (Short Term Course) on "Recent Trends in Materials, Manufacturing and Safety" held on 27-31 October, 2014 at Department of Mechanical Engineering GZS PTU Campus Bathinda.
- (vi) **Organizer secretary of National Conference on Latest Developments in Materials, Manufacturing and Quality Control is organized to be on 19-20 February, 2015.**

- (vii) **Organizer secretary of International Conference on Latest Developments in Materials, Manufacturing and Quality Control is organized to be on 12-13 February, 2016.**
- (viii) **Organized One Week AICTE-ISTE approved Refresher Programme on "Recent Trends in Materials, Manufacturing and Safety" held on 25-30 June, 2018 as Program Coordinator at Department of Mechanical Engineering GZS PTU Campus Bathinda.**

#### 17. Conferences/Workshops attended:

- (i) Attended 8th ISME Conference, on Mechanical Engineering," held at Indian Institute of Technology, Delhi., India on 5-6 March 1993.
- (ii) Attended National Conference, "Advancements & Futuristic Trends in Mechanical & Materials Engineering," held at GZS CET Bathinda, Punjab India, 13-14th October, 2006
- (iii) Attended International Conference, "Advances in Mechanical Engineering," held at Baba Banda Singh Engineering College, Fatehgarh Sahib, Punjab, India, 1-3rd December, 2006.
- (iv) Attended First International and 22nd All India Manufacturing Technology Design & Research Conference held at IIT, Roorkee- India on 21-23rd December 2006.
- (v) Attended National Conference on Recent Advances in Mechanical Engineering, Rayat Institute of Engg. & Information Technology Railmajra, Nawanshar. Punjab, INDIA 08-09 September 2006.
- (vi) Attended Global Conference on Production and Industrial Engineering (CPIE-2007) Dr. B R Ambedkar National Institute of Technology, Jalandhar (India) 22-24 March 2007
- (vii) Attended National Conference on Current Trends in Electrical Engineering (CTEE-08) as a member of Technical Session Committee held on 14-02-2008. at GZS CET Bathinda, Punjab India,
- (viii) Attended Patent Awareness Workshop at Yadvindra College of Engineering Punjabi University, Guru Kashi Campus Rama-mandi Road Talwandi Sabo, Distt. Bathinda Punjab, India (11th Dec, 2009)
- (ix) Attended National Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering at Yadvindra College of Engineering Punjabi University, Guru Kashi Campus Rama-mandi Road Talwandi Sabo, Distt. Bathinda Punjab, India (February 19-20, 2010)
- (x) Attended one day Workshop on " Procurement and PMSS Training" held at Chandigarh organized by State Project Facilitation Unit for TEQIP-II Union Territory Chandigarh in Collaboration with NPIU on 15th March 2012
- (xi) Attended National Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering AFTMME'12 at Punjab Technical University Jalandhar Jalandhar-Kapurthala Highway Kapurthala Punjab-144601, India (October 5-7, 2012)
- (xii) Attended two day Workshop on " Procurement and PMSS Training" conducted by NPIU on 27-28 May 2013 at GNDU Amritsar
- (xiii) Attended two day Workshop on "TEQIP Academic Activities & MIS Training" conducted by NPIU on 30-31 May 2013 at GNDU Amritsar.
- (xiv) Attended one day Workshop on "TEQIP Financial Management & e-FMR Training" conducted by NPIU on 1st June 2013 at GNDU Amritsar.
- (xv) Attended Two-day Industry-Academia Collaboration Workshop on June 27-28, 2013 at NITTER Chandigarh.
- (xvi) Attended Three-day PTU NBA Workshop on the topic of outcome Based Accreditation held at PTU Jalandhar from 26-07-2013 to 28-07-2013.
- (xvii) Attended Two-day conference at Shanghai, China and presented paper entitled "Effect of Process Parameters on Dimensional Control of Mild Steel Processed By Surface Grinding Process" International Conference on Industrial Engineering and Management Science (ICIEMS 2013) at Shanghai, China on September 28-29, 2013.
- (xviii) Chaired Technical session of International Conference on "Research and Innovations in Mechanical Engineering". ICRIME-2013 a two-day conference held on October 24-26, 2013 at Guru Nanak Dev Engineering College, Ludhiana, Punjab, INDIA.
- (xix) Attended Three-day Workshop on Quality Initiatives in Technical & Higher Educational Institutions (in Compliance with NBA & NAAC Accreditation) 09-11 June 2014, at Engineering State College of India Hyderabad.
- (xx) Attended Management Development Programme "Academic Leadership" (January 06-11, 2014) Indian Institute of Management Kozhikode.

- (xxi) Attended Three-day has participated in the Management Development Programme November 08-10, 2013 & February 10-12, 2014 Indian Institute of Management Kozhikode.
- (xxii) Attended Three-day and participated in the Internationalization of Higher Education Dated on 20th-22nd March, 2014 Jaipur (Rajasthan)
- (xxiii) Attended two-day International Fall 2014 Global Mindset Development in Leadership and Management Conference and presented paper entitled "Investigation of Just in Time Production Attributes for Supply Chain Management" Organized by University of Riverside held on September 12-13, 2014 at Ayres Hotel Manhattan Beach 14400 Hindry Ave Los Angeles, California USA.
- (xxiv) Chaired Technical session of International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering AFTMME'14 at Punjab Technical University Jalandhar Jalandhar-Kapurthala Highway Kapurthala Punjab-144601, India (October 16-18, 2014)
- (xxv) Attended Workshop on Designing Medical Implants & Fixtures 9th May & 10th 2015 at Indian Institute of Technology, Delhi.
- (xxvi) Attended Short Terms School/Courses on Biogas Production, Purification and Power Generation under QIP sponsored by TEQIP, IIT Delhi 18th – 20th May, 2015.
- (xxvii) Attended Three-day Workshop on NBA Accreditation) 18-20 June 2015, at Institution of Engineers ( India), Shimla HP
- (xxviii) Attended Short Terms School/Courses on Product Design and Innovation under TEQIP, IIT Delhi 15th – 17th July, 2015.
- (xxix) Attended Certificate Program on Branding & Corporate Communications under QIP sponsored by TEQIP, IIT Delhi on 8th and 9th of August, 2015.
- (xxx) Attended 17th ISME National Conference and presented a paper on October 3-4, 2015, at IIT Delhi, New Delhi Effect of Forge Pressure on Tensile strength of Friction Welded Stainless Steel 304 and 6063 Aluminum alloy.
- (xxxi) Attended TEQIP-II sponsored National Conference on Latest Developments in Civil and Environment Engineering 2015 (LDCEE'15) 15th-16th Oct., 2015 Organized by Department of Civil Engineering, GZS Campus College of Engineering & Technology, Maharaja Ranjit Singh State Technical University, Bathinda.
- (xxxii) Attended 20th International conference on Green Manufacturing Engineering at Vancouver, Vancouver Canada Sep 17-18, 2018 and presented research paper "Charaterization of Aluminium Alloy 6063 Hybrid Metal Matrix Composite by Using Stir Casting Method."

#### 18. Short Terms School/Courses attended:

S. No.	Title of the school/course	Held at	Duration of school/course
01	Industry Institute Interfacing- Innovative Approaches	Dept. of Training & Placement B.R.Ambedkar R.E.C Jalandhar	Dr 12.02.96 to 17.02.96
02	Casting Technology, Quality Management and Pollution Control in Foundries	Dept. of Metallurgical Engg M.R.E.C, Jaipur	22.12.97 to 03.01.98
03	Neural Networking and Fuzzy Logic Systems Using C++	GZS College of Engg. and Tech., Bathinda (Pb.)	28.12.98 to 08.01.99
04	Non Conventional Refrigeration & Cryogenic Technology	Dept. of Mech. and Production. Engg College, Ludhiana (Pb.)	GND 21.07.99 to 03.08.99
05	A Workshop on System Simulation	Dept. of Mech. and Production. Engg College, Ludhiana (Pb.)	GND 27.12.99 to 07.01.2K
06	High Temperature Corrosion of Metals and Alloys	Dept. of Met. and Mat. Engg., IIT, Roorkee	07.07.02 to 12.07.02

07	NSS Training & Orientation /Refresher Course	GZS College of Engg. and Tech., Bathinda (Pb.)	17.11.03 to 26.11.03
08	Effective Teacher	QIP Centre, Indian Institute of Technology Roorkee (Uttaranchal)	21.06.04 to 02.07.04
09	Teaching Methodologies and Pedagogy	QIP Centre, Indian Institute of Technology Roorkee (Uttaranchal)	14.02.05 to 18.02.05
10	Nano Technology - Nano Materials & Their Applications	QIP Centre, Indian Institute of Technology Roorkee (Uttaranchal)	21.02.05 to 25.02.05
11	Mathematical Modelling of Real Life Problems	QIP Centre, Indian Institute of Technology Roorkee (Uttaranchal)	04.07.05 to 15.07.05
12	Advanced Processing of Composite Materials	QIP Centre, Indian Institute of Technology Roorkee (Uttaranchal)	24.07.06 to 28.07.06
13	Sound & Vibrations: Fundamentals, Measurements and Diagnostic Analysis"	QIP Centre, Indian Institute of Technology Roorkee (Uttaranchal)	06.07.09 to 10.07.09
14	Industrial Engg. In Current Business Paradigm- Issues and Challenges	Dr.B.R.A.N.I.T.Jalandhar	July 12-16,2010
15	Earthquake Risk Management for Urban And Rural Housing	N.I.T.T.T.& Research Chandigarh,at GZSCET Bathinda	06.12.10 to 10.12.10
16	Welding Roadmap to Excellence	Dr.B.R.A.N.I.T.Jalandhar	Dec.27-31,2010
17	IPR for Pharmaceutical Sector & Patent System in India	N.I.T.T.T. & Research Chandigarh at GZSCET Bathinda	04.08 April 2011
18	GIS Application in Engineering & Sciences	N.I.T.T.T. & Research Chandigarh at GZSCET Bathinda	Dec 12-16 2011
19	Climate Changes and Disaster Management	N.I.T.T.T. & Research Chandigarh, at GZSCET Bathinda.	16-20 Jan.2012
20	Total Quality Management and NBA Accreditation in Technical Institutions	N.I.T.T.T.& Research Chandigarh at GZSCET Bathinda.	28.05.12 to 01.06.2012
21	Sustainable Development: Issues and latest Developments	N.I.T.T.T.& Research Chandigarh, at GZSCET Bathinda	2-13 July.2012
22	Energy Sources and computational Techniques in Electrical Engineering.	N.I.T.T.T.& Research Chandigarh, at GZSCET Bathinda (Under TEQIP-II)	15-19 July.2013
23	"Recent Trends In Materials, Manufacturing and Safety"	Department of Mechanical Engineering GZS PTU Campus Bathinda. (Under TEQIP-II)	2-6 December, 2013
24.	Recent Trends in Materials, Manufacturing and Safety” held on 27-31 October, 2014 at Department of Mechanical Engineering GZS PTU Campus Bathinda.		
25	Recent Trends in Automobile Engineering through ICT held on 16-03 2015 to 20.03.2015 by N.I.T.T.T. & Research Chandigarh at Department of Mechanical Engineering GZS PTU Campus Bathinda.		
26.	A short term course on "Integrated Automation Technologies" under TEQIP-II in association with Automation Industry Association (AIA) from 1-6 June 2015 at I.I.T. Delhi.		
27.	Optimization using MATLAB through ICT held on 24.10. 2016 to 28.10.2016 by N.I.T.T.T. & Research Chandigarh at Department of Mechanical Engineering GZS PTU Campus Bathinda.		
28.	Participated in AICTE recognized Short Term Course on Faculty Development Programme on Entrepreneurship Development by N.I.T.T.T. & Research Chandigarh conducted by		

Entrepreneurship Development and Industrial Coordination Department from 18.09.2017 to 22.09.2017 at GZS PTU Campus Bathinda.

29. Participated AICTE-ISTE approved Refresher Programme on "Recent Trends in Materials, Manufacturing and Safety" held on 25-30 June, 2018 as Program Coordinator at Department of Mechanical Engineering GZS PTU Campus Bathinda.
30. Attended short term course "Intellectual property rights-aspects for business start-ups" through ICT held on 10/06/2019 to 14/06/2019, Organized by Entrepreneurship Development and Industrial Coordination Department, National Institute of Technical Teachers Training and Research Sector 26, Chandigarh.

#### 19 Expert Lectures Delivered).

- i) An Introduction to Research Methodology at PTU GZS Campus
- ii) An Overview of the Ceramic Shell Investment Casting Process MIMT Malout on 12-07-2012
- iii) "Fundamentals of metal casting" Guru Kashi University Talwandi Sabo on 06-09-2013.
- iv) Recent Advances in metal casting" GZS PTU Campus Bathinda on 06-12-2013.

#### 20. Sponsored Research Projects:

S. No.	Title	Sponsored by
1	Pattern Tooling and Quality Optimization for Investment Castings	Ministry of Human Resource Development (MHRD) New Delhi at IIT Roorkee
2	Ph. D. Research for three years	All India council of Technical Education New Delhi under its Quality Improvement Scheme
3	<b>Technical Education Quality Improvement Programme-II (Sub Component 1.1)</b> Strengthening Institutions to improve Learning Outcomes and employability of Graduates	World Bank assistance. (2010-16) Ten Crore Sanctioned Under this project.

#### 21. Work Experience :

1. Worked as Research Scholar in Dept. of Mechanical & Industrial Engg. Indian Institute of Technology Roorkee on deputation under Quality Improvement Programme sponsored by All India Council of Technical Education from 19.07.2004 to 18.07.2007.
2. Worked as Demonstrator on adhoc basis from 17.11.1992 to 30.06.94, Lecturer (adhoc) from 18.07.1994 to 13.09.1995 in Mechanical Engineering Department of Guru Nanak Dev Engineering College Ludhiana (Punjab), India.
3. Worked as Lecturer from 31.01.1996 to 05.12.1999, Lecturer (Sr. Scale) from 06-12-1999 to 05.12.2004 in Mechanical Engineering Department of GZS College of Engineering and Technology, Bathinda (Punjab), India.
4. Worked as Assistant Professor from 06-12-2004 (Under CAS) to 05-12-2007 in Mechanical Engineering Department of GZS College of Engineering and Technology, Bathinda (Punjab), India.
5. Worked as Associate Professor from 06-12-2007 to 05-12-2010 in Mechanical Engineering Department of GZS College of Engineering and Technology, Bathinda (Punjab), India
6. Working as Professor from 06-12-2010 to till date in Mechanical Engineering Department of GZS College of Engineering and Technology, Bathinda (Punjab), India.

#### 22. Administrative responsibilities:

1. Worked as Professor & Head 05-05-2017 to 13-07-2020 in Mechanical Engineering Department of GZS College of Engineering and Technology, Bathinda (Punjab), India.
2. Director Punjab Institute of Technology (PIT) Nandgarh w.e.f 01-06-2017 to 03-03-2020.
3. Worked as **Coordinator Technical Education Quality Improvement Programme Teqip-II** (w.e.f Oct 2011 to 27-10-2015)
4. Completed Successfully Tenure (Two years) as **Dean Research & Development** (w.e.f Oct 2011 to 28-11-2013)
5. Worked as **Coordinator Quality Improvement Programme QIP Minor centre GZS PTU CAMPUS Bathinda** (w.e.f Oct 2012 to 28-11-2013).

1. **Co-ordinator/Dean, Academic affairs.** (w.e.f 03-06-09 to 10-06-2011).
2. **Incharge NCC** unit of college (w.e.f 22-12-2008 to 18-07-2012).
3. Worked as **NSS Programmer Officer** (w.e.f July 2002 to July 2004).
4. Worked as Hostel Warden and managed affairs of the following hostels.
  1. **Warden Hostel No.1** w.e.f. July 1997 to September 2000
  2. **Warden Hostel No.2** w.e.f. Sept 2007 to September 2010
5. Incharge of college Kabaddi team Aug 2008 to till Date.
6. Faculty in charge Mechnoclique w.e.f Aug 2008 to Feb 2012.
7. Chairman of various purchase & inspection committees constituted from time to time.

### 23. Academic accomplishments so far and future academic plans:

- 1 Chairman of Board of studies Mechanical Engineering MRS PTU Bathinda.
- 2 Member of Academic Council MRS PTU Bathinda.
- 3 Expert member PTU Nodal center of NBA Training.
- 4 Member of Board of studies Mechanical Engineering PTU Jalandhar.
- 5 Member of Board of studies Mechanical SBS State Technical Campus Ferozpur.
- 6 Member of Academic Council SBS State Technical Campus Ferozpur.
- 7 Institutional eligibility proposal submitted to NPIU for grant from World Bank. Institutional development proposal submitted to NPIU for grant from World Bank. **10 Crore sanctioned under Technical Education Quality Improvement Programme TEQIP-II.**
- 8 Increased intake of seats in Mechanical Engineering from 60 seats to 120 seats, Computer Science Engineering from 60 seats to 90 seats and Electronics & Communication from 40 to 60. Three year Diploma course is introduced from Academic session 2010.
- 9 Reviewed conference and journal papers and evaluated three Ph.D Thesis Abstract.
- 10 Expert for various selections of teaching & non teaching posts.
- 11 Member of Panel of Reviewers for Indian Journal of Research in Engineering and Technology.
- 12 Executive member for an International Conference on “Advancement & Futuristic Trends in Mechanical & Materials Engineering held on 3rd - 6th October, 2013.

### 24. M Tech/PhD Thesis Completed/ Under Guidance

Sr No.	Name of Candidate	Topic	M-Tech / PhD	Remarks
1	Er Ajay Sadahna	Analysis of microstructure and mechanical properties obtained by friction stir welding of aluminum and magnesium alloys.	M. Tech	Completed
2	Er. Amanpreet Singh	“Experimental investigation of physical and thermal properties of wax patterns used in ceramic shell investment casting”.	M. Tech	Completed
3	Er Ashwani Kumar	Influence of tool pin profile and tool shoulder diameter on the mechanical properties of joint of aluminium alloys 2014 and 6082, welded with friction stir welding	M. Tech	Completed
4	Er Yadwinderpal Sharma	Investigation of the effect of welding parameters on metallurgical properties of friction stir butt welded joint of dissimilar aluminium alloys 2024 and 6061	M. Tech	Completed
5	Er Vikram	Charaterization of hydroxyapatite (HA) coating on AISI 316l stainless steel.”	M. Tech	Completed
6	Er Balwant Singh	“Some investigations into the effect of process parameters on surface quality in surface grinding”	M. Tech	Completed
7	Er Sukhwinder Singh	Effect of chromium and copper addition on wear resistance of hypoeutectic al-si alloy	M. Tech	Completed
8	Er Yogesh Sharma	“Study of High Temperature Erosion - Corrosion Behavior with Different Coatings Using Detonation Gun Sprayed Method Boiler Steel Tubes”.	M. Tech	Completed
9	Er Ankit Jain	“Study Of High Temperature Erosion -Corrosion Behavior With Different Coatings Using Detonation Gun Sprayed Method On ASTM-SA210 Grade A1 Boiler Steel Tubes”	M. Tech	Completed
10	Er Deeepak Kamra	“Effect of the intermixed electrodes on weld metal properties in Shield Metal Arc Welding Process (SMAW)	M. Tech	Completed
11	Mr. Jagdeep Sharma	“Investigation of effects of dry and near dry machining on AISI D2 steel using vegetable oil.”	M. Tech	Completed
12	Er Satnam Singh	Investigation of mechanical properties & wear resistance of carburized mild steel”	M. Tech	Completed
13	Er Manoj Kumar	Evaluation of Mechanical Properties of friction stir welded Al 2014 T4 & Al 6061 T6 Alloys”	M. Tech	Completed

14	Er Lakhwinder Singh	Optimization of green sand casting process parameters affecting LM 25 aluminium alloy by Taguchi's method"	M. Tech	Completed.
15	Er Haramritpal Singh	"Effect of Under Surface Cooling on Surface Properties of Friction Stir Processed Aluminum 6082 alloy."	M. Tech	Completed.
16	Er Randhir	"Optimization of Machining Parameters for fine turning of AISI 4340 Alloy steel using Taguchi Technique"	M. Tech	Completed
17	Er Harpreet Singh	A Comparative analysis of metal working fluids using minimum quality lubrication turning on EN-19 steel.	M. Tech	Completed
18	Er Deepinder Kumar	To study the effect of process parameters on the mechanical properties of investment cast aluminium Alloy ADC12	M. Tech	Completed
19	Er Manmeet Singh	Effect of Metal inert gas welding process parameters on the Metallurgical & Mechanical properties of S-304 Steel."	M. Tech	Completed
20	Er Joyti Prakash	To Study the Morphology on the Tungsten Carbide Material by using Copper, Copper Tungsten and Graphite Electrode	M. Tech	Completed
21	Er. Vijay Kumar	"Effect of Post Weld Heat Treatment on Mechanical & Metallurgical Properties of Weldment by Using MIG welding Technique"	M. Tech	Completed
22	Er Jaskirat Singh Sekho	Investigation of Microstructure and Mechanical Properties of Friction Stir Welded Similar Aluminium Alloys"	M. Tech	Completed
23	Er. Rajiv Kumar	Effect of process parameters on surface finish of high chromium high carbon steel processed by wire cut electrical discharge machine.	M. Tech	Completed
24	Er Amit Bjaj	Total Productive Maintenance Implementation in Small Industry"	M. Tech	Completed
25	Er Puneet Sharma	Investigation of effect of nanofluids on MQL turning D2 steel"	M. Tech	Completed
26	Er. Jagjeet Singh Chatha	Investigation of Microstructure and Mechanical Properties of Weld Joint of stainless steel 304 and 6063 Aluminum Alloys by FSW"	M. Tech	Completed
27	Er. Manmeet Singh	"Study The Effect of various Parameters of MIG Welding over Mechanical & Metallurgical Properties of S304"	M. Tech	Completed
28	Er, Gurleen Singh	Investigation of Microstructure and Mechanical Properties of Aluminum Alloys 7075 by undercooling Friction Stir Processing"	M. Tech	Completed
29	Er. Keshav Kamboj	"To Study The Mechanical Properties Of Aluminium Alloy ADC 10 By Using Blended Wax Pattern Through investment Casting"	M. Tech	Completed
30	Er. Lovepreet Singh	"Effect of Tool Diameter and Tool Position on Mechanical Properties of Dissimilar AA7075and AA6061Friction Stir Welded Joints"	M. Tech	Completed
31	Er. Satbir Sharma	Effect of tool geometry on mechanical properties of dissimilar aluminium 6063 & 7075 welded with single and double friction stir welding process.	M. Tech	Completed
32	Er. Sukhwant Singh	"To Study the Mechanical Properties of Aluminum Alloy 6063 by using blended wax Pattern through investment casting"	M. Tech	Completed
33	Ramandeep Singh Sidhu	Optimization of gas carburized process parameters for mechanical properties on aisi 1020by using taguchi approach	M. Tech	Completed
34	Sukhchain Singh	Modification of EN-8D Steel Surface by Salt Bath Nitrocarburizing and Post Oxidation Process.	M. Tech	Completed
35	Purnendu Pal	Characterization of short basalt fiber reinforced polymer matrix composites using flyash as filler	M. Tech	Completed
36	Hardeep singh	Effects of various input parameters using carburizing process on EN353 steel.	M. Tech	Completed
37	Jaspreet Singh Sra	Investigation of effects of vacuum hardening temperature on mechanical properties of the AISI D2 STEEL.	M. Tech	Completed
38	Babu Lal	Study of effect of instant surface modification technique on mechanical properties of mild steel	M. Tech	Completed.
39	Harpreet Singh	Study of Detonation gun sprayed coating on ASTM-SA213T22 Boiler steel tubes in molten salt environment at 900 C	M. Tech	Completed.
40	Bharat Bansal	Experimental Investigation of the effect of wet surface flow-directors on performance of desert cooler.	M. Tech	Completed.
41	Vijay Kumar	Investigation of effects thermal assisted machining of 31 steel.	M. Tech	Completed
42	Er. Harman Singh	Study of erosion corrosion behavior of boiler steels	PhD	Completed
43	Er. Mohan Singh	Some investigations in composite materials	PhD	Under Going
44	Er. Baltej Singh	Optimization of EDM process parameters for better surface quality of die steels.	PhD	Under Going
45	Er. Kulwinder Singh	Optimization of investment casting process parameters for better mechanical properties.	PhD	Under Going
46	Er. Ajay Sadhana	Some investigations in ceramic shell investment casting.	PhD	Under Going
47	Er. Gurvinder Singh	Some investigations in friction stir welding.	PhD	Under Going
48	Er Ashwani Kumar	Optimization of friction stir welding process parameters on the mechanical properties of joint of aluminium alloys 2014 and 6082.	PhD	Under Going
49	Er Haramritpal Singh	"Some investigations of Under Surface Cooling of Friction Stir Processed Aluminum 6082 alloy."	PhD	Under Going
50	Er Amanpreet Singh	"Experimental investigation of physical and thermal properties of wax patterns used in ceramic shell investment casting"	PhD	Under Going

51	<b>Dr. Jagdeep Sharma</b>	<b>“Some Investigations of dry and near dry machining on AISI D2 steel using vegetable oil.”</b>	<b>PhD</b>	<b>Completed</b>
52	Er J.S Tiwana	Experimental investigation of physical and thermal properties of plastic injection molding.	PhD	Under Going

## 25 Other Administrative duties.

- i) Performed duty of Observer for CET 2010.
- ii) Performed duty of Presiding Officer duty for conducting Joint Entrance Examination (JEE) 2010 & 2011.
- iii) Performed duty of Controller Exam & Nodal Centre for May/June 2010.
- iv) Performed duty of Controller Nodal Centre of DEP for Sept/Oct 2010.
- v) Flying Squad duty performed May – June 2017-2019 exams of MRSPTU Bathinda.

## 26. Awards/Fellowships

All India Council of Technical Education India Research Fellowship for Ph. D. under Quality Improvement Programme.

## 27. Institutional Development Proposals Prepared & Submitted.

### The following Proposals Prepared & Submitted for the Institutional Development

- i. Detailed Project Report (DPR) for autonomous college status of Giani Zail Singh College of Engineering and Technology, Bathinda Submitted to University Grants Commission.
- ii. Detailed Project Report (DPR) for adaptation of Giani Zail Singh College of Engineering & Technology Bathinda as State technical university Submitted to Punjab Govt.
- iii. Detailed Project Report (DPR) Submitted to AICTE for increase of seat intake.
- iv. Institutional eligibility proposal submitted to NPIU for grant from World Bank.
- v. Institutional development proposal submitted to NPIU for grant from World Bank.
- vi. Proposal for Development Assistance from UGC for PTU GZS Campus Bathinda under 12th Five Year Plan of the ministry of human resource development government of India Submitted through Punjab Technical University Jalandhar on 02 April 2012 to Secretary, University Grants Commission, Bahadur Zafar Marg, New Delhi-110002.



**28 List of publications National / International Journals and Conferences.**

S No.	Title	Co-Authors, if any	Name of Journal	Volume & Year	Pages	ISSN/ISSN No. /Impact Factor
1	Experimental Investigation of wax Blends in Investment Casting Process”,	Kumar, Pradeep, Mishra, B .K.	Indian Foundry Journal	Vol. 52, No.3, 2006)	pp. 29-36	ISSN 0379-5446/NA
2	Parametric Optimization of Slurry Composition used in Ceramic Shell Investment Casting Process through Taguchi Method”		Indian Foundry Journal	Vol. 52, No.10, 2006)	pp. 25-33	ISSN 0379-5446/NA
3	Effect of Slurry Composition on Plate Weight in Ceramic Shell Investment Casting”	Kumar, Pradeep, Mishra, B .K.	Journal of Materials Engineering & Performance JMEP	Vol 17, No.4/August 2008	pp 489-498	1059-9495 (Print) 1544-1024 (Online)/1.094
4	Investigations of the effect of injection parameters on the quality of wax patterns used in ceramic shell investment casting”.	Kumar, Pradeep, Mishra, B .K.	International Journal of Manufacturing Technology and Management,	vol. 21, No. 1/2,	pp. 148-159	ISSN:1741-5195DOI: 10.1504/IJMT /4.1187
5	Parametric Optimization of Casting Surface Roughness Produced by Ceramic Shell Investment Casting Process”	Pardeep Kumar and B.K. Mishra	International Journal of Surface Engineering & Materials Technology,	Vol. 1 No. 1 July-Dec. 2011	pp. 48-55	ISSN: 2249-7250 /NA
6	Effect of tool rotation speed on microstructure and mechanical properties of friction stir welded Al6061-T6 alloy	Ajay Sidana, Kulbir Singh Sandhu	International Journal of New Innovations	2012, 1(2),	295-299	2277-4459 /NA
7	Effect of process parameters on surface roughness of mild steel processed by surface grinding process”	Balwant Singh	Asian Journal of Engineering and applied Technology,	Vol. 1 No. 2 July-Dec. 2012	pp. 1-4	ISSN 2249-068X /NA
8	Evaluation of Primary Slurry Used in Ceramic Shell Investment Casting Process.”	Pradeep Kumar, B.K.Mishra	International Journal of Emerging Technology and Advanced Engineering	Volume 2, Issue 10, October 2012	pp 525-529	ISSN 2250-2459 /2.324
9	The “5S” stragy by using PDCA cycle for continuous improvement of the manufacturing processes in agriculture industry	Vipan Kumar, Amit Bajaj	International Journal of Advanced Scientific and Technical Research	Issue 3 Volume 5), Sep-Oct 2013	Page 181-197	ISSN 2249-9954 /3.94

S No.	Title	Co-Authors, if any	Name of Journal	Volume & Year	Pages	ISSN/ISSN No. /Impact Factor
10	Evaluation and Characterization of different biomass residue through proximate & ultimate analysis and heating value.	Harmandeep Singh, Pawan Kumar	Asian Journal of Engineering and applied Technology	Vol. 2 No. 2 July-Dec. 2013,	pp. 6-10	ISSN 2249-068X/NA
11	Evaluation of Mechanical Properties of FSW Al 2014 T4 & Al 6061 T6 Alloys”	Manoj Kumar,	Asian Review of Mechanical Engineering	Vol. 2 No. 2, 2013	pp.1-5	ISSN 2249 - 6289 /NA
12	Influence of Tool Pin Profile on Mechanical Properties of Joint of Aluminium Alloys 2014 and 6082, Welded With Friction Stir Welding”	Ashwani Kumar,	Asian Review of Mechanical Engineering	Vol. 2 No. 2, 2013	pp.66-71	ISSN 2249 - 6289 /NA
13	Influence of tool shoulder diameter on the mechanical properties of friction stir welded dissimilar aluminium alloys 2014 and 6082	Ashwani Kumar	International Journal of Surface Engg. & Materials Technology	Vol. 4, No. 1 (2014)	05 – 10	ISSN: 2249-7250
14	Investigation of effects of dry and near dry machining on AISI D2 steel using vegetable oil.	Jagdeep Sharma	Journal of Cleaner Production	Vol. 2 No. 66 2014	p. 619-623.	ISSN: 0959 /4.959
15	Effect of Process Parameters on Micro Hardness of Mild Steel Processed by Surface Grinding Process	Balwant Singh	IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE)	e- Volume 10, Issue 6 (Jan. 2014),	PP 61-65	ISSN: 2278-1684, p-ISSN: 2320-334X, /1.753
16	Investigate on manufacture of advance composite material with three dimensional braiding technology”	Mohan Singh	Indian Journal of Applied Research,	Volume : IV, Issue. IV -April - 2014	PP 69-70	ISSN: 2249-555X, /2.1653
17	Thermogravimetric investigation of Mustard Straw and its ash in Oxidizing and Inert Atmosphere”,	Harmandeep Singh, Pawan Kumar Sapra,	International Journal of Mechanical engineering & materials science (IJMEMS),	Vol. 8(1), Jan-June 2015	, pp. 59-64	ISSN: 0974-584X,NA

18	“ Investigation of effects of Nanofluids on turning of AISI D2 Steel using Minimum Quantity Lubrication”	Jagdeep sharma Puneet Sharma	Journal of Cleaner Production	July 2015 <a href="https://doi.org/10.1016/j.jclepro.2015.07.122">doi:10.1016/j.jclepro.2015.07.122</a>		ISSN: 0959/4.959
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19	Effect of under surface cooling on tensile strength of friction stir processed aluminium Alloy 6082	Haramritpal Singh Pardeep Kumar	Asian Journal of Engineering and applied Technology	JANUAR Y-JUNE 2016 VOL.5 No.1	40-44	ISSN 2249-068X /NA/
20	Effect of Process Parameters on the Hardness and Impact Strength of Ceramic Shell Investment Cast Aluminum Alloy ADC12	Singh and Rajesh Gupta	Asian Review of Mechanical Engineering	Vol. 5 No. 2, 2016,	pp. 1-5	ISSN: 2249 – 6289/NA
21	Effect of process parameters on surface finish of LM-25 aluminum alloy casting produced by green sand moulding.	Lakhwinder Singh	American Journal of Engineering Research (AJER)	Volume 5 - Issue 9 September 2016	10-16	e-ISSN : 2320-0847 p-ISSN : 2320-0936/NA
22	Effect of Nitro carburizing and Post Oxidation on Micro hardness and wear resistance of En-8 Steel.	Sukhchain Singh, Jagdeep Sharma	International Journal of Modern Engineering Research.	Volume 6 Issue 9 September 2016	pp 53-57	ISSN: 2249–6645 /2.10
23	Effect of green sand moulding parameters on hardness of LM-25 aluminum alloy castings	Lakhwinder Singh	International Journal of Innovative Studies in Sciences and Engineering Technology.	Volume 2 Issue 9	pp 1-4	ISSN 2455-4863 /0.229
24	Effect of Gas Carburized Process Parameters on Micro-Hardness and Wear Resistance of EN353 Steel.	Pargeet Chauhan	I J A M R© Serials Publications.	9(2) 2017 : July-December	pp. 9-15	
25	Effects of Arcor Nitrocarburizing Process on the Case Chemistry and Morphology of AISI 1018 Low-Carbon Steel	Jagdeep Sharma	Materials Performance and Characterization, <a href="https://doi.org/10.1520/MPC20180078">https://doi.org/10.1520/MPC20180078</a> .	Vol. 7, No. 1, 2018.	351–364,	ISSN 2379-1365
26	Determination of the Optimum Conditions for Salt Bath Ferritic Nitrocarburizing Process of AISI 1018 Steel using ANOVA Method	Jagdeep Sharma , Rajesh Gupta	Journal of Thin Films, Coating Science Technology and Application, 2018	Volume 5, Issue 1 <a href="http://www.stmjournals.com">www.stmjournals.com</a>	1-7	ISSN: 2455-3344 (Online)
27	Characterization of Aluminium Alloy 6063 Hybrid Metal Matrix Composite by Using Stir Casting Method.	-----	World Academy of Science, Engineering and Technology International Journal of Industrial and Systems Engineering.	Vol:12, No:10, 2018	1-5	

28	Surface Modification of AISI 1018 Low Carbon Steel by Duplex Treatment of Nitrocarburizing and Post-Oxidation.	-----		<b>J. Surface Sci. Technol.</b> June 2019	Vol 35(1-2), pp. 77-81,	ISSN (Online) : 0976-9420
29	Optimization Of Gas Carburization Process Parameters For Wear Resistance of AISI 1020 Low Carbon Steel.	Ramandeep Singh Sidhu,	Industrial Engineering Journal	Vol. XI & Issue No. 6 June - 2018	15-18	
30	Effect of Process Parameters on Tensile Strength of Aluminum Alloy ADC 10 Produced through Ceramic Shell Investment Casting	-----	World Academy of Science, Engineering and Technology International Journal of Materials and Metallurgical Engineering	Vol:12, No:11, 2018	1-1	
31	Fabrication and development of natural fibres reinforced epoxy composites using fly ash as filler material	Jasnoor Kaur Jatinder Kumar, Veerpaul Kaur Maan	International Journal of Latest Engineering and Management Research (IJLEMR)	Volume 04 - Issue 06    June 2019	PP. 125-131	ISSN: 2455-4847 www.ijlemr.com 
32	Development of applications of Infrared heating in Ferritic Salt bath Nitrocarburizing process."	Jagdeep Sharma	Materials Performance and Characterization			ISSN 2379-1365

Sr No. **National / International Conferences.**

1. Balwinder Singh Sehijpal Singh, Dr R.P Singh "An Experimental approach to improve domestic refrigerator performance through waste heat recovery" presented published 8th ISME Conference, on Mechanical Engineering," held at Indian Institute of Technology, Delhi., India on 5-6 March 1993.
2. Balwinder Singh, Kumar, Pradeep, B. K. Mishra, (2005) "Experimental Investigation of Wax Blends for Dimensional Accuracy of the Pattern Used in Investment Casting Process". All India Seminar on Advances in Production Engineering: Vision 2020, MNIT, Jaipur, Dec. 30-31 2005.
3. Balwinder Singh, Kumar Pradeep, Mishra, B. K., (2006), "Thermal analysis of paraffin, bees, carnauba and motan waxes used for pattern making in ceramic shell investment casting process" National Conference on Recent Advances in Mechanical Engineering, Rayat Institute of Engg. & Information Technology Railmajra, Nawanshar. Punjab, INDIA 08-09 Sept 06. Pp177-181.
4. Balwinder Singh, Kumar Pradeep, Mishra, B. K., (2006), Effect of raw materials and their processing on the ceramic shell moulds used in investment casting' Advancements & Futuristic Trends in Mechanical & Materials Engineering (AFTMME'06), BATHINDA. Punjab, INDIA, October 13-14,2006, pp 72-78.

5. Balwinder Singh, Kumar Pradeep, Mishra, B. K., (2006), "Prediction of Wax Pattern Dimensions in Ceramic Shell Investment Casting Process" National Conference on Recent Developments and Future Trends in Mechanical & Materials Engineering (RDFTME-2006).NIT Hamirpur November 2006, pp 246-250.
6. Balwinder Singh, Kumar Pradeep, Mishra, B. K., (2006), Parametric optimization and surface characterization of wax patterns to be used in ceramic shell investment casting, International Conference on Advances in Mechanical Engineering (AME2006),Fatehgarh Sahib, Punjab, INDIA, December 1-3, 2006, pp143-148.
7. Balwinder Singh, Kumar Pradeep, Mishra, B. K., (2006), Investigations of the Effect of Injection Parameters on the Dimensional Accuracy of the Wax Patterns Used in Investment Casting, First International and 22nd AIMTDR conference IIT Roorkee. 21st-23rd Dec. 2006, pp. 497-502..
8. Balwinder Singh, Kumar Pradeep, Mishra, B. K., (2006), "Development of water based primary slurry for ceramic shell investment casting process" National Conference on Investment Casting, Univ. College of Engg., Osmania University, Hyderabad, December 28-29, 2006, p11.
9. Balwinder Singh, Kumar Pradeep, Mishra, B. K., (2007), "Surface Roughness Prediction of Ceramic Shell Investment Process Castings through –Response Surface Methodology", National Conference on Design, Dynamics and Manufacturing at Sant longowal institute of Engineering and Technology( NCDDM' 2007),Longowal-148106, Punjab, India, march 16-17, pp 233-238.
10. Balwinder Singh, Kumar Pradeep, Mishra, B. K., (2007), "Performance Study of Zircon Flour Slurry with Filler Material in Ceramic Shell Investment Casting Process" Global Conference on Production and Industrial Engineering (CPIE-2007) Dr. B R Ambedkar National Institute of Technology,Jalandhar (India), March 22-24, 2007 pp 27.
11. Balwinder Singha, Pradeep Kumarb and B.K.Mishrab "Effect Of Process Parameters On Surface Roughness Of Ceramic Shell Investment Castings" National Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering at Yadindra College of Engineering Punjabi University, Guru Kashi Campus Rama-mandi Road Talwandi Sabo, Distt. Bathinda Punjab, India (February 19-20, 2010).
12. Kulbir Singh Sandhu,Ajay Sidana, Balwinder Singh (2011) "Friction Stir welding of dissimilar Aluminium and Magnesium Alloys used in Automobile and Aerospace industry" Proceedings of National Conference on Latest Advancement in Science, Engineering and Research (LASER'11) May 26th &27th, 2011, Baba Farid College of Engineering and Technology, Bathinda.
13. Balwinder Singh, Pardeep Kumar and B.K. Mishra (2011) "Parametric Optimization of Casting Surface Roughness Produced by Ceramic Shell Investment Casting Process" National Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (AFTMME'11) held on 6-7 October 2011 at Punjab Technical University Jalandhar (Pb.) India.
14. Ajay Sidana, Kulbir Singh Sandhu, Balwinder Singh "Friction stir welding of magnesium alloys-A Review". Presented and published in the proceeding of Recent Advancements and Innovations In Science and Engineering (RAISE-2012) on 6th&7th Jan, 2012 at GRDIET, Bathinda.
15. Balwinder Singh, Kumar, Pradeep, Mishra, B .K "Simulation of wax pattern dimensions for accuracy improvement in ceramic shell investment castings" International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering held on October 5-7, 2012.
16. Amanpreet Singh, Balwinder Singh "Experimental Evaluation of Shrinkage in Wax Pattern Dimensions used in Ceramic Shell Investment Casting Process" 3rd National Conference on "Recent Advances in Manufacturing (RAM-2012)" 27-29, June 2012 at SVNIT Surat
17. Amanpreet Singh, Balwinder Singh "Thermal analysis of wax patterns used in ceramic shell investment casting process" International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering held on October 5-7, 2012.
18. Balwinder Singh, Balwant Singh "Effect of process parameters on surface roughness of mild steel processed by surface grinding process" International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering held on October 5-7, 2012.

19. Sukhwinder Singh , Balwinder Singh “Effect on additions of chromium and copper on micro hardness of Al-9.1%Si Alloy” 2nd International Conference on Advances in Materials and Manufacturing Technology (AMMT 2012) Oct 06, 2012.
20. Sukhwinder Singh , Balwinder Singh Effect of Minor Additions of Chromium and Copper on Surface Roughness of Al-9.1% Si Alloy International Conference on Advancements in Engineering & Technology (ICAET-2012) held on 12-13, October 2012, Bhai Gurdas Institute of Engineering & Technology (BGIET), Sangrur, Punjab, India.
21. Balwinder Singh, Balwant Singh “Effect of Process Parameters on Dimensional Control of Mild Steel Processed By Surface Grinding Process”. International Conference on Industrial Engineering and Management Science (ICIEMS 2013) held on September 28-29 2013 Shanghai,China.
22. Harmandeep Singh, Pawan Kumar Sapra, Balwinder Singh “Evaluation and characterization of different biomass residues through proximate & ultimate analysis and heating value” International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering held on October 3-6, 2013.
23. B.S.Sidhu, Jagdeep Sharma “A Comparative review of various environment friendly emerging lubrication techniques in manufacturing.” International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering held on October 3-6, 2013.
24. Balwinder Singh Sidhu, Yadwinderpal Sharma, Pardeep Kumar “A Review on the effect of welding parameters on mechanical properties of friction stir butt welded dissimilar aluminium alloys”. International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering held on October 3-6, 2013.
25. Balwinder Singh Sidhu, Manoj Kumar, Pawan Kumar Sapra “ Evaluation of mechanical properties of FSW AL 2014 T4 & AL 6061 T6 Alloys International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering held on October 3-6, 2013.
26. Vijay Kumar, Balwinder Singh, Manoj Mittal “Study of strength of joint made by two different alloy by MAG welding. International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering held on October 3-6, 2013.
27. Ashwani Kumar, Balwinder Singh Sidhu, , Pardeep Kumar “Influence of tool pin profile on the mechanical properties of joint of aluminium alloy 2014 and 6082, welded with friction stir welding”. International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering held on October 3-6, 2013.
28. Ankit Jain, Yogesh Kumar Sharma, Dr. Balwinder Singh “Combating Erosion-Corrosion Behavior of Detonation Gun Sprayed Satellite-6 Coating on Grade A-1 Boiler Steel in a Coal Fired Boiler” held on February 20-21, 2014 at Victor Menezes Convention Centre, IIT Bombay(CORSYM 2014).
29. Yogesh Kumar Sharma, Ankit Jain, Dr. Balwinder Singh “High Temperature Erosion-Corrosion Behavior of Carbide Based Detonation Gun Coating in a Coal Fired Boiler” held on February 20-21, 2014 at Victor Menezes Convention Centre, IIT Bombay(CORSYM 2014).
30. Haramritpal Singh,Balwinder Singh " Effect of Under Surface Cooling in Friction Stir Processing of Aluminium Alloy 6082-A Review' in TEQIP-II Sponsored National Conference 'Latest Developments in Materials, Manufacturing and Quality Control; (MMQC-14) organized by the Department of Mechanical Engineering, Giani Zail Singh Punjab Technical University Campus, Bathinda on (13-14)th February, 2014.
31. Harpreet Singh, Balwinder Singh " A Review on Different Optimization Approaches Used in Turning Operation for Enhancing Results' in TEQIP-II Sponsored National Conference 'Latest Developments in Materials, Manufacturing and Quality Control; (MMQC-14) organized by the Department of Mechanical Engineering, Giani Zail Singh Punjab Technical University Campus, Bathinda on (13-14)th February, 2014.
32. Ashwani Kumar, Balwinder Singh " Influence of Tool Pin Profile on Mechanical Properties of Aluminium Alloys, Welded with Friction Stir Welding: A Review' in TEQIP-II Sponsored National Conference 'Latest Developments in Materials, Manufacturing and Quality

- Control; (MMQC-14) organized by the Department of Mechanical Engineering, Giani Zail Singh Punjab Technical University Campus, Bathinda on (13-14)th February, 2014.
33. Yadwinderpal Sharma, Balwinder Singh " Influence of Tool Geometry on Mechanical Properties of Friction Stir Welded Aluminium Alloys - A Review' in TEQIP-II Sponsored National Conference 'Latest Developments in Materials, Manufacturing and Quality Control; (MMQC-14) organized by the Department of Mechanical Engineering, Giani Zail Singh Punjab Technical University Campus, Bathinda on (13-14)th February, 2014.
  34. Harmandeep Singh, Balwinder Singh " Ash Deposition and Related Problems in Biomass Based Power Plants - A Review' in TEQIP-II Sponsored National Conference 'Latest Developments in Materials, Manufacturing and Quality Control; (MMQC-14) organized by the Department of Mechanical Engineering, Giani Zail Singh Punjab Technical University Campus, Bathinda on (13-14)th February, 2014.
  35. Lakhwinder Singh, Balwinder Singh " Effect of Process Parameters on Surface Finish of LM-25 Aluminum Alloy Casting Produced by Green Sand Moulding' in TEQIP-II Sponsored National Conference 'Latest Developments in Materials, Manufacturing and Quality Control; (MMQC-14) organized by the Department of Mechanical Engineering, Giani Zail Singh Punjab Technical University Campus, Bathinda on (13-14)th February, 2014.
  36. Harmandeep Singh, Balwinder Singh " Experimental Characterization of Barley Straw Through Through Thermogravimetric Analysis in Nitrogen Atmosphere' in TEQIP-II Sponsored National Conference 'Latest Developments in Materials, Manufacturing and Quality Control; (MMQC-14) organized by the Department of Mechanical Engineering, Giani Zail Singh Punjab Technical University Campus, Bathinda on (13-14)th February, 2014.
  37. Randhir Singh, Balwinder Singh " Effect of Turning Parameters on Surface Roughness of Heat Treated AISI 4340 Steel in TEQIP-II Sponsored National Conference 'Latest Developments in Materials, Manufacturing and Quality Control; (MMQC-14) organized by the Department of Mechanical Engineering, Giani Zail Singh Punjab Technical University Campus, Bathinda on (13-14)th February, 2014.
  38. Jyoti Parkash, Balwinder Singh " To Study the Morphology of Tungsten Carbide Machined by Electric Discharge Machining Using Copper Tungsten and Graphite Electrode' in TEQIP-II Sponsored National Conference 'Latest Developments in Materials, Manufacturing and Quality Control; (MMQC-14) organized by the Department of Mechanical Engineering, Giani Zail Singh Punjab Technical University Campus, Bathinda on (13-14)th February, 2014.
  39. Harnamrpal Singh Balwinder Singh " Effect of Under-Surface Cooling on Micro Hardness of Friction Stir Processed Aluminium Alloy(Al 6082)' in TEQIP-II Sponsored National Conference 'Latest Developments in Materials, Manufacturing and Quality Control; (MMQC-14) organized by the Department of Mechanical Engineering, Giani Zail Singh Punjab Technical University Campus, Bathinda on (13-14)th February, 2014.
  40. Balwinder Singh "Investigation of Just in Time Production Attributes for Supply Chain Management" International Fall 2014 Global Mindset Development in Leadership and Management Conference, Organized by University of Riverside held on September 12-13, 2014 at Ayres Hotel Manhattan Beach 14400 Hindry Ave Los Angeles, California USA.
  41. Harmandeep Singh, Pawan Sapra, Balwinder Singh "Thermogravimetric Investigation of Mustard Straw and its ash in oxidizing and inert atmosphere." Presented in International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering AFTMME'14 at Punjab Technical University Jalandhar Jalandhar-Kapurthala Highway Kapurthala Punjab-144601, India (October 16-18, 2014).
  42. Harnamrpal Singh, Pardeep Kumar Balwinder Singh, "Effect of under surface cooling on surface properties of friction stir processed aluminium alloy 6082" International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering AFTMME'14 at Punjab Technical University Jalandhar Jalandhar-Kapurthala Highway Kapurthala Punjab-144601, India (October 16-18, 2014).
  43. Deepinder Kumar, Balwinder Singh "Parametric optimization of tensile strength of aluminium alloy ADC 12 Produced by ceramic shell investment casting process" International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering

- AFTMME'14 at Punjab Technical University Jalandhar Jalandhar-Kapurthala Highway Kapurthala Punjab-144601, India (October 16-18, 2014).
44. Ashwani Kumar, Balwinder Singh Sidhu, Pardeep Kumar "Influence of tool shoulder diameter on the mechanical properties of friction stir welded dissimilar aluminium alloy 2014 and 6082". International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering AFTMME'14 at Punjab Technical University Jalandhar Jalandhar-Kapurthala Highway Kapurthala Punjab-144601, India (October 16-18, 2014).
  45. Mohan Singh, Balwinder Singh "Recent developmet in Aluminium alloys for the advance composite material in industry" International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering AFTMME'14 at Punjab Technical University Jalandhar Jalandhar-Kapurthala Highway Kapurthala Punjab-144601, India (October 16-18, 2014).
  46. Balwinder Singh "Effect Process Parameters On Tensile Strength Of Aluminium Alloy ADC12 Castings Produced By Ceramic Shell Investment Casting Process" 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.
  47. Keshav Kamboj Balwinder Singh "Effect of process parameters on tensile strength of aluminium alloy ADC 10 produced through ceramic shell investment casting" 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.
  48. 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.
  49. Balwinder Singh Ankit Jain Vikas Chawla Evaluation Of Erosion-Corrosion Resistance Of Some Detonation Gun Sprayed Coatings on Grade A-1 Boiler Steel In A Coal Fired Boiler. 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 at GZS PTU Campus Bathinda.
  50. Randhir Singh Balwinder Singh "Effect of heat treatment on the hardness of AISI 4340 heat treated steel". 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 at GZS PTU Campus Bathinda.
  51. Balwinder Singh Lakhwinder Singh Ranjeev Kumar Bansal "Effect of green sand moulding parameters on hardness of LM-25 aluminum alloy castings" 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.
  52. Jagjeet Singh Chatha Balwinder Singh Yadwinderpal Sharma "Evaluation of Tensile strength of Friction Welded Stainless Steel 304 and 6063 Aluminum alloy. 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.
  53. Haramritpal Singh Dr. Balwinder Singh Er. Pardeep Kumar "Effect of Under Surface Cooling On Surface Properties of Friction Stir Processed Aluminium Alloy 6082 - A Review" 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.
  54. Yadwinder Pal Sharma Balwinder S. Sidhu "Influence Of Tool Shoulder Diameter On Mechanical Properties Of Aluminium Alloys, Welded With Friction Stir Welding-A Review" 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.
  55. Jyoti Prakash , Balwinder Singh "To study the morphology of Electric Discharge Machining process on Tungsten Carbide by using copper, graphite, copper tungsten electrodes" 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.
56. Balwinder Singh Pradeep Kumar B.K.Mishra “ Evaluation of Primary Slurry Used in Ceramic Shell Investment Casting Process” 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.
  57. Sukhwant Singh, Balwinder Singh “An approach to produce good quality wax patterns for investment casting by controlling wax injection parameters” 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.
  58. Balwinder Singh Sidhu Rajesh Gupta Jagdeep Sharma “Salt bath nitro carburizing process – A review” 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.
  59. Harmandeep singh Pawan Kumar Sapra Balwinder Singh Sidhu “Thermal analysis of biomass residues - A review” 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.
  60. Amit Bajaj Veerpal Kaur Mann Balwinder Singh “Total Productive Maintenance Implementation In Small Scale Industry ‘A Case Study’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.
  61. Balwinder Singh A Saxena1 Avneet singh Manjot singh Mohit goyal Shiv kumar Sukhvir mittal “Saving Water with Mechmechanism”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.
  62. Lovepreet Singh Balwinder Singh Yadwinderpal Sharma “ Effect Of Tool Diameter and Tool Position On Mechanical Properties Of Dissimilar AA7075 And AA6061 Friction Stir Welded Joint” 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.
  63. Balwinder Singh “Effect of Forge Pressure on Tensile strength of Friction Welded Stainless Steel 304 and 6063 Aluminum alloy”. 17th ISME National Conference on October 3-4, 2015, at IIT Delhi, New Delhi.
  64. Balwinder Singh Ajay Sidhana “Studies of factors effecting zircon slurry rheology” TEQIP-II sponsored National Conference on Latest Developments in Civil and Environment Engineering 2015 (LDCEE’15) 15th-16th Oct., 2015 Organized by Department of Civil Engineering, GZS Campus College of Engineering & Technology, Maharaja Ranjit Singh State Technical University, Bathinda.
  65. Balwinder Singh, A Saxena “Design of water saving mechanism” TEQIP-II sponsored National Conference on Latest Developments in Civil and Environment Engineering 2015 (LDCEE’15) 15th-16th Oct., 2015 Organized by Department of Civil Engineering, GZS Campus College of Engineering & Technology, Maharaja Ranjit Singh State Technical University, Bathinda.
  66. Satnam Singh, Kulwinder Singh, Balwinder Singh “Investigation of Wear Resistance of Mild Steelby Carburizing Process”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.
  67. Balwinder Singh , Satvir Sharma, Yadwinderpal Sharma “Effect of tool geometry on the tensile strength of welded joint using single and double sided Friction stir welding (FSW) of aluminum alloy 6063 and 7075 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.
68. Balwinder Singh , Jaskirat Singh Sekhon, Yadwinderpal Sharma “Investigation of Mechanical Properties of 6000 series Aluminum Alloy Welded with Friction Stir Welding” 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.
  69. Balwinder Singh<sup>1</sup>, Rajesh Gupta “Effect of process parameters on the Hardness and impact strength of Ceramic Shell investment cast aluminum Alloy ADC12” 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.
  70. Balwinder Singh, Gurleen Singh “Investigation of micro hardness and tensile strength of dissimilar aluminum alloys AA7075 and AA6061 welded by under cooling Friction Stir Processing” 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.
  71. Sukhwant Singh, Balwinder Singh Optimization of mechanical properties of aluminum alloy 6063 produced through investment casting by controlling Casting parameters 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.
  72. Balwinder Singh, Jagjeet Singh Chatha “Investigation of Microstructure and Mechanical Properties of Weld Joint of Stainless Steel 304 and 6063 Aluminium alloy by Friction Welding Process” 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.
  73. Keshav Kamboj ,Balwinder Singh “ Effect of process parameters on micro hardness of aluminium alloy ADC 10 produced through ceramic shell investment casting” 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.
  74. Jasvir Singh Tiwana , Balwinder Singh ,Sahil Bansal “Analysis of key process parameters in Blow molding for improving quality of PET Bottle” 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.
  75. Jasvir Singh Tiwana , Balwinder Singh, Parminder singh “Optimization of process parameters of blow molding for PET bottles” 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.
  76. 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.
77. Balwinder Singh, Randhir Singh “Effect of tempering on the hardness of AISI 4340 heat treated 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.
  78. 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.
  79. Balwant Singh, Balwinder Singh “To Study the effect of process parameters on surface integrity in mild steel by surface grinding process” 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.
  80. Balwinder Singh, Lakhwinder Singh, Rajiv Kumar Bansal “Effect of green sand moulding process parameters on surface integrity of LM-25 aluminum alloy casting” 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.
  81. Haramritpal Singh, Balwinder Singh “Effect of under surface cooling on tensile strength of friction stir processed aluminium alloy 6082” International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering AFTMME’14 at Punjab Technical University Jalandhar Punjab-144601, India (February 24-25, 2016).
  82. Balwinder Singh, Jyoti Prakash “To Study Surface Roughness of Tungsten Carbide by Using Copper, Graphite, Copper Tungsten Electrodes in Electric Discharge Machining Process” International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering AFTMME’14 at Punjab Technical University Jalandhar Punjab-144601, India (February 24-25, 2016).
  83. Balwinder Singh “Charaterization of Aluminium Alloy 6063 Hybrid Metal Matrix Composite by Using Stir Casting Method.” 20th International conference on Green Manufacturing Engineering at Vancouver, Vancouver Canada Sep 17-18, 2018.

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