

CURRICULUM VITAE

Dr. Kamlesh Kumar Singh

Professor

Department of Foundry Technology

National Institute of Foundry and Forge Technology

P.O. - Hatia, Ranchi -834003, Jharkhand, INDIA

Telex: NIFFT, Fax: (0651) 2290860;

Phone: (0651) 2292027(O), 9934107324 (M)

E-mail: kksingh_nifft@yahoo.com

Present Status

: Professor

Educational Background

:

1. **Ph. D.** in Materials and Metallurgical Engineering from I. I. T., Kanpur. (Completed in January 1999)

Thesis Title *Effect of grain size and microstructural correlations in the plastic behaviour of 316L austenitic stainless steel*

Supervisors **Prof. G. S. Murty and Prof. S. Sangal**

Thesis brief The thesis aimed to understand the plastic deformation behaviour of 316L austenitic stainless steel over a wide range of temperatures and grain size. A stereological method has been developed to estimate the true dihedral angle distribution from the measured distribution of plain dihedral angle. A mechanistic model has also been developed to understand the temperature and grain size dependence of flow stress of a polycrystalline material.

2. **M. Tech.** in Materials & Metallurgical Engineering from I. I. T., Kanpur (Completed in December 1992).

Project Title *Carbonate capacity of high temperature polymeric melts*

Supervisor **Prof. A. Ghosh**

Project brief The thesis aimed to study the basicity of slags by measuring the Carbonate capacity using

thermogravimetric method. A correlation has been developed between the carbonate capacity, sulphide capacity and optical basicity of $\text{Na}_2\text{O-SiO}_2\text{-B}_2\text{O}_3$ melt.

3. **B. Sc. in Metallurgical Engineering** from B. I. T. Sindri. (Completed in October 1990).

Project Title *Cold model study of mixing time in combined blowing process*

Supervisor **Late Prof. U. S. Srivastava**

Project brief The project aimed to study the comparative mixing time in top, bottom and combined blowing in metal refining by cold modelling.

Award and Recognition Received

1. Received award and certificate for “the IIF best Technical Paper (ferrous) for the year 2005 published in Indian Foundry Journal” during the inaugural session of Indian Foundry Congress on 20th January 2006 at Pune.
2. Received the recognition memento for successfully organizing the World Workshop on Foundry, Forge and Forming (wwff05)” on 17-18th August 2005 at NIFFT, Ranchi, India. Organized by NIFFT in association with IIF Ranchi Chapter.
3. Received recognition memento for successfully organizing the various seminars and conferences in the capacity of Hony. Secretary of IIF Ranchi chapter.
4. was the chairman of the Panel discussion session, other panelists were: Mr SVS Tyagi, EX. GM, TATA MOTORS, Jamshedpur, Prof. G. L. Dutta, IIT Kharagpur, Dr. S. Ghosh, Sr. DGM, NML Jamshedpur, Mr. P. K. Sinha, GM, TATA MOTORS, Jamshedpur, in Look East conf. - 2009 on Low cost high quality cast components for Engineering applications, 11th April-2009 at Jamshedpur, jointly organized by IIF Eastern region and IIF Jamshedpur chapter.
5. Was the Co-chairman of Technical Session 3A (Composite and Wear) in the 57th Indian Foundry Congress, Feb 13-15, 2009 at Kolkata.

6. Was the Co-Chairman of Technical paper selection committee and also the Co-Chairman of the technical paper presentation committee of 61st Indian Foundry Congress, held on 27-29 Jan, 2013 at Kolkata.
7. Was the Co-Chairman of one session of Green India initiative conclave on world Environment day Jan 5, 2013 at New Delhi; organize by South Asia forum for Energy Efficiency.
8. Was the Co-chairman of the one session on Science and Spiritual Quest & 18th all India students conference, 1-2 Feb, 2014, IIT BHU, Varanasi India.
9. Was the Co chairman of the technical committee of Indian Foundry convention (IFCON 2018) held at Bombay Exhibition Centre, Mumbai, 14-16th March, 2018; organized by IFO and Ministry of heavy Industries, GOI.
10. Chair the technical session on Foundry on 14th March in IFCON 2018, held at Bombay Exhibition Centre, Mumbai, 14-16th March, 2018; organized by IFO and Ministry of heavy Industries, GOI.

Courses Teaching/Taught

1. Foundry Technology (B.Tech., IIIrd Year, MME)
2. Technology of special Foundry Processes (B.Tech., IIIrd Year, ME)
3. Metal Shaping Processes (ADC, Foundry and Forge)
4. Engineering Materials and Metallurgy (B.Tech., IInd Year, ME)
5. Physical Metallurgy (B.Tech., IIIrd Year, MME)
6. Physical Metallurgy and Metallography (B.Tech., IInd Year, ME)
7. Melting and Casting Techniques (ADC Foundry)
8. Foundry Tooling and Methoding (M. Tech., FFT)
9. Physical Metallurgy of Castings and Forgings (M. Tech., FFT)
10. Technology of Ferrous Casting (M. Tech., FFT)
11. Advanced Metal Casting Technology ((M. Tech., ME)
12. Near Net Shape Processes (M. Tech., FFT)

Apart from teaching other responsibility holding/performed

1. Chairman Industrial Liaison Cell – From May 2006 to Nov. 2012
2. Member Library committee- from May 2005 to April 2012
3. B. Tech. Course Co-ordinator- From May 2006 to May 2011
4. Member Annual Report committee- In year 2009
5. Member secretary Industrial Service centre- In year 2008-2009
6. Co-ordinator IIF & NIFFT
7. Coordinator for setting R&D, ITI, Diploma course etc in Foundry Park at Kolkata
8. Coordinator NIFFT & Durham University, UK.
9. Coordinator Industry-Institute Partnership Cell, NIFFT
10. B.Tech Hostel Warden
11. Member NIFFT Alumni Association
12. Member in committee for Auction of old vehicles etc.
13. CPIO, NIFFT (RTI)- From April 2011 to June 2012
14. Professor In-charge Administration- From 1st June 2011 to July 2012
15. Head of Department of Foundry Technology, NIFFT- From 1st August, 2011 to 31st July 2014
16. Chairman SWACHCHA BHARAT ABHIYAN, NIFFT from 24 Sep, 2014.
17. Secretary of core committee for Golden Jubilee celebration of NIFFT.
18. Chairman Students Gymkhana, NIFFT from July 2013 to August 2017
19. Chairman, Industrial Liaison Cell (ILC), NIFFT from August 2017 and continuing
20. Chairman NIFFT NIWAS from August 2017 and continuing
21. Chairman UNNAT BHARAT, NIFFT from October 2017 and continuing

Training & Experience :

1. Vocational Training in P.D.I.L. Sindri during B.Sc. Engg. in the field of Metallography, Corrosion, Non-destructive Testing and X-rays.
2. After Ph.D. Thesis submission in April 1998, One-month (May 1998) consultancy works on utilisation of Fly ash in brick making. Project was sponsored by DUNCAN Group.

3. One-week training course on Teaching Excellence in 2002 at Osmania University, Hyderabad.
4. One-week training course on “Casting design and simulation” at IIT Mumbai in 2006.
5. Four weeks training from 15th Dec. 2003 to 10th Jan. 2004 at Rail Wheel Factory, Bangalore. Study of wheel and axle manufacturing and rejection analysis was made and fruitful suggestions were given to RWF.
6. Attended the 3 days CAMO Course on Advance Multivariate Data Analysis & Simulation Techniques at NIFFT, Ranchi during January 11-13, 2007.
7. Attended two days workshop on “Right to Information Act 2005, Court Cases & Management of Govt. Records” on 28-29th Oct., 2011 at Hotel The Connaught, New Delhi. Workshop organized by Centre for Training & Social Research.
8. As a Lecturer in Foundry Technology Department, NIFFT, Hatia, Ranchi from June 1998 to Feb 2005.
9. As an Assistant Professor in Foundry Technology Department, NIFFT, Hatia, Ranchi from Feb 2005 to Feb 2008.
10. As an Associate Professor in Foundry Technology Department, NIFFT, Hatia, Ranchi from Feb 2008 to Aug. 2015.
11. As Professor in Foundry Technology Department, NIFFT, Hatia, Ranchi from Aug. 2015 and continuing.

Projects supervised:

- | | | |
|-------------------------------------|---|------|
| 1. Advanced Diploma Course Projects | : | 40 |
| 2. B. Tech. projects | : | 12+2 |
| 2. M. Tech. Projects | : | 22+2 |
- a. Failure analysis of cast components (Sintered grate bar)
 - b. Study of growth kinetics of hardened phase in induction hardening of medium carbon Steel.
 - c. Production of Hadfield steel through exothermic reaction.
 - d. Improvement in nodularity value of graphite nodules in S. G iron and its effect on mechanical properties.

- e. Analysis of process compensation factors of Turbine housing.
- f. Axle Line Capacity Upgradation Planning (From existing 40/shift to 100/shift for multi model 30:25 model)
- g. Productivity and Quality improvement for alloy wheel Castings in low pressure die casting
- h. Studies on Rheocast and Conventional Cast Aluminium based Alloys.
- i. Analysis of Structure and Properties for Ductile Iron.
- j. Structure-properties correlation of thin wall austempered ductile iron
- k. Process Parameter optimization of thin wall ductile Iron (TWDI) casting
- l. Optimization of various process parameters of Austempered ductile Iron.
- m. Study of solidification behavior of Grey Cast Iron
- n. Study of solidification behavior of S. G. Iron
- o. Design and simulation of an automotive casting
- p. Study on the effects of austempering variables and copper addition on mechanical properties of austempered ductile iron.
- q. Effect of inoculation and spheroidizing treatment on thermal analysis of S G Iron
- r. Process parameter optimization of an automotive casting
- s. Thermomechanical simulation of microalloyed high strength steel
- t. Effect of Phosphorous on Structure-properties Of Grey Cast iron
- u. Effect of Heat treatment on microstructure and mechanical properties of S. G. Iron
- v. Effect of different inoculants on microstructure and mechanical properties of S. G. Iron
- w. Design, construction and fabrication of small size cupola.
- x. Effect of wall thickness and heat treatment variables on structures properties of austempered ductile iron
- y. Process parameter of optimization of an automobile casting.

Ph.D.

- a. Mr. Rajat Upadhyaya; Synthesis and characterisation of Thin wall Austempered Ductile Iron (TWADI), Guide: Dr. K.K. Singh
- b. Mr. Rahul Kumar; Metal matrix Nano Composites; Guide: Dr. Amitesh Kumar and Dr. K. K. Singh
- c. Mr. Salim Ansari; Lead alloy solidification; Guide Dr. Amitesh Kumar and Dr. K. K. Singh
- d. Mr. Nadeem Bhatt; A study on graphite nucleation and shrinkage control in spheroidal graphite cast iron: Guide Dr. D. M. Afzal Khan and Dr. K. K. Singh

Publications

A. Papers Published in referred Journals:

(a) International Journals

1. K. K. Singh and A. Ghosh: Carbonate Capacities of $\text{Na}_2\text{O-SiO}_2\text{-B}_2\text{O}_3$ Melts; ISIJ International, Vol. 34, (1994), No. – 2, P – 150-154.
2. K. K. Singh and S. Sangal: Mechanistic Model for Grain Size and Temperature dependence of Flow stress: Materials Science and Technology, Vol. 17, (2001) No. – 11, P. – 1253 – 1258.
3. K. K. Singh, S. Sangal and G. S. Murty: Hall-Petch Behaviour of 316L Austenitic Stainless Steel at Room Temperature; Materials Science and Technology, Vol. 18, (2002) No. – 2, P – 165-172.
4. K. K. Singh, S. Sangal and G. S. Murty: Hall Petch Behaviour of 316L Austenitic Stainless Steel at Elevated Temperature; Materials Science and Technology. Vol. 18 (2002) No. – 10, P-1168-1178.
5. D. Mazumdar, K. K. Singh and A. Ghosh: Measurement and Computation of Drag Forces in Thermo gravimetric Studies; Met. and Mat. Trans. B, Vol.-33, (2002), P. - 891-896.
6. K. K. Singh: Strain Hardening Behaviour of 316L Austenitic Stainless Steel; Materials Science and Technology, Vol.-20, (2004), No. 2, P.-1134.

7. A. K. Dey, P. Poddar, K. K. Singh, K. L. Sahoo: Mechanical and Wear properties of Rheocast and Conventional Gravity Die cast A356 alloy; Material Science and Engineering A, Vol. 435-436; 2006, 521-529.”
8. K. K. Singh and S. K. Sethy: Recalescence and shrinkage relationship in ductile Iron: A case study on Front Engine support casting by thermal analysis; submitted for publication in International Journal of Cast Metal Research (Status- with editor)
9. K. K. Singh, B. Venkanna Patrudu, Rajat Updhyaya; Identification and Control of Micro Porosity for aluminum alloy Wheel casting; International Journal of Engineering Research and Technology, Vol.- 3, issue- 5, May- 2014
10. Ganesh Vidyarthi and K.K. Singh thin wall austempered ductile iron; A best replaceable material and to steel aluminum International Journal of Mechanical Engineering and Robotics Research; Vol. -3, No-3, July, 2014, PP- 465-473
11. K. K. Singh, Rajendra Kumar and Rajat Upadhaya; Axle line capacity up-gradation by process planning: International Journal of Engineering Research and Technology (IJERT), Vol-3, issue-8, August- 2014, PP- 265-272

(b) National Journals

1. V. Santosh Kumar, K. K. Singh and K. P. Sathaye: Minimizing the lead time in manufacturing of an automotive casting by process simulation: A case study of ductile iron casting (turbine housing); Indian Foundry Journal, Vol. - 51, 2005, P. - 29-35.
2. K. K. Singh, B. V. Patrudu and S. N. Prasad: Production of Al-alloy wheel castings and minimizing the air-leak rejection; Indian Foundry Journal, Vol. 52, No.-4, 2006, p- 28-37.
3. K. K. Singh: Energy Efficiency in Foundry by process and casting rejection control; Indian Foundry Journal, Vol. 53, No.-11, 2007, p- 43-55.
4. K. K. Singh and Rajni Ranjan Mishra: Minimizing the casting defect using casting simulation- A case study of an industrial casting; Indian Foundry Journal, Vol. 57, No.-1, 2011, p- 49-52

5. Saroj Kumar, D. J. Gawai, D. N. Prasad and K. K. Singh: Optimization of Structure-Property of Thin walled Austempered ductile Iron; Accepted for publication in Indian Foundry Journal.
6. K. K. Singh “Melting Practice for quality castings”, presented in the workshop at IIF center Kolkata on 13th April, 2012 and the report published in Indian Foundry Journal, Vol- 58, No-7, 2012, P-91.
7. K. K. Singh, Mohmmad Shamim and Himansu Garg: Effect of austempering parameters on austempered ductile iron – Part -I; Foundry Review, Vol. 1, issue 16, Dec, 2013, P- 2-4.
8. K. K. Singh, Mohmmad Shamim and Himansu Garg: Effect of austempering parameters on austempered ductile iron – Part -II; Foundry Review, Vol. 2, issue 01, Jan, 2014, P- 2-5.
9. Rajat Upadhyaya, Kamlesh Kumar Singh and Rajeev Kumar. Microstructure and Mechanical properties of thin wall ductile iron. Journal of Automobile Engineering and Applications. 2017;4(2):35–39p
10. Rajat Upadhyaya, Kamlesh Kumar Singh and Rajeev Kumar. Effect of heat treatment parameters on the characteristics of thin wall austempered ductile iron casting. IOP Conference Series: Materials Science and Engineering 330 (012084).
11. Rajat Upadhyaya and Kamlesh Kumar Singh. Effect of some inoculants on the structure and properties of thin wall ductile iron. Material Today: Proceeding(Elsevier) Volume 5, Issue 2, Part 1, 2018, Pages 3595-3601
12. Rajat Upadhyaya Kamlesh Kumar Singh and Rajeev Kumar. Study on the effect of austempering temperature on the structure-properties of thin wall austempered ductile iron. Material Today: Proceeding(Elsevier) (In Press)
13. Rajat Upadhyaya Kamlesh Kumar Singh and Rajeev Kumar. Effect of cerium on the manufacturing and the final properties of thin wall ductile iron. Metallurgy Research & Technology, International journal of metallurgy. (Under Review)
14. Rajat Upadhyaya Kamlesh Kumar Singh and Rajeev Kumar. Synthesis and characterization of thin wall ductile iron. Transaction of the Indian Institute of Metals. (Under Review)

B. Papers Published/Presented in Conferences:

1. K. K. Singh and S. Sangal: A Quantitative Metallographic Technique for the Estimation of Relative distribution of Grain Boundaries in Polycrystalline materials; 6th Int. Conf. on Super plasticity of Advanced materials, Feb. – 1997, Bangalore, India, P – 149.
2. S. B. Kumar, K. K. Singh and J. K. Singh: Failure analysis of Grate Bar: A case Study; 37th NMD and 53rd ATM of The Indian Institute of Metals, 13-16th Nov. 1999, I.I.T. Kanpur, India.
3. K. K. Singh and S. Sangal: Grain size and Temperature dependence of Flow Stress: A mechanistic model; 37th NMD and 53rd ATM of The Indian Institute of Metals, 13-16th Nov. 1999, I.I.T. Kanpur, India.
4. K. K. Singh: Effect of Cu and Cr on the structure and mechanical properties of Grey Cast Iron; 39th NMD and 55th ATM of the Indian Institute of Metals, 18-21st Nov. 2001, Bhubaneswar, India.
5. S. K. Sarangi, K. K. Singh and V. K. Sinha: Study of Growth Kinetics of Hardened Phase in Induction Hardening of Medium Carbon Steel; 39th NMD and 55th ATM of The Indian Institute of Metals, 18-21st Nov. 2001, Bhubaneswar, India.
6. K. K. Singh: Strain Hardening Behaviour of 316L Austenitic Stainless Steel; 40th NMD and 56th ATM of The Indian Institute of Metals, 14-17th Nov. 2002, Vadodara, India.
7. K. K. Singh: Pollution Control and Energy Savings in Indian Foundry Melting Practices; National Seminar on Environment-Friendly Industries – Today & Tomorrow (EFITT 2003); 8-9th Nov. 2003, Ranchi, India, Organised by Indian Institution of Plant Engineers.
8. V. Santosh Kumar, K. K. Singh and K. P. Sathaye: Minimizing the lead time in manufacturing of an automotive casting by process simulation: A case study of ductile iron Casting (turbine housing), January 21-23, 2005 53rd Indian Foundry Congress, Kolkata, India.
9. K. K. Singh, M. K. Thakur and V. P. Saha: Pig Iron and its use in Indian Foundry Industries: Workshop on “Use of Alloyed Pig Iron in Mini Steel plants and Foundries; September 30, 2005, New Delhi, India. The workshop

was organized by MECON Limited, Department of Mines and Department of Science and Technology, Govt. of India.

10. K. K. Singh, B. V. Patrudu and S. N. Prasad: Energy Conservation in Foundry by Process and Casting Rejection Control; South Asia Energy Conservation Conclave, 17-19 February, 2006 at Ranchi, India; organised by IIF Ranchi Chapter.
11. Subrata Kumar Sethy and Kamlesh Kumar Singh; A Thermal Analysis Study of Effect of Recalescence on Shrinkage Behaviour of Ductile Iron: A Case Study of Front Engine Support Casting; presented the paper in 55th Indian Foundry Congress, February, 3-5, 2007, Agra, India and published in Transaction.
12. K. K. Singh: Energy Efficiency in Foundry by process and casting rejection control; National seminar on Energy Efficiency in Foundries and Secondary Steel Sectors, 17-18th August 2007 at NIFFT, Ranchi; organised by NIFFT in association with IIF Ranchi Chapter.
13. K. K. Singh: Energy Efficiency in Industrial Sectors; Seminar on Energy Efficiency and CDM Project, 4th October 2007 at Hotel Yuvraj Palace, Ranchi; Organized by SBI Ltd
14. A technical paper on “Minimizing the casting defect using casting simulation –A case study of an industrial casting: K. K. Singh and Rajani Ranjan Mishra” was presented by me in the 57th Indian Foundry Congress, Feb 13-15, 2009 at Kolkata.
15. A technical paper on “Graphene-based composite materials as a future composite material: Ankit Sharma, Navneet Kumar Vishwakarma, Ramchandra Hansda and K. K. Singh” was presented in Look East conf. -2009 on Low cost high quality cast components for Engineering applications, 11th April-2009 at Jamshedpur, jointly organized by IIF Eastern region and IIF Jamshedpur chapter.
16. A technical paper on “Nano-material as a future material for engineering application: Shantanu Agrawal, Abhishek Kumar, Prince Raj, Satyendra Kumar Pandey and K. K. Singh” was presented in Look East conf. -2009 on Low cost high quality cast components for Engineering applications, 11th

- April-2009 at Jamshedpur, jointly organised by IIF Eastern region and IIF Jamshedpur chapter.
17. A technical paper on “Optimization of Structure-Property of Thin walled Austempered ductile Iron” by Saroj Kumar, D. J. Gawai, D. N. Prasad and K. K. Singh, at 59th Indian Foundry Congress held at Chandigarh, 11 to 13 Feb.-2011. The paper was presented by Dr. K. K. Singh.
 18. K. K. Singh, Chandraveer Singh, Vinod Kumar, Reduction of Energy in Foundry by Process and Casting Rejection Control, Presented in National Symposium, Energy Conservation Conclave – 2012 during 14th – 15th January, 2012 at NIFFT, Hatia, Ranchi.
 19. K. K. Singh and Rajat Upadhyay; “Effect of section thickness and Austempering variables on structure-property of thin wall austempered ductile iron” was presented in 60th Indian Foundry Congress, 2-4th March, 2012 at Bangalore, India.
 20. Piyush Talwar, Abul Kalam and K. K. Singh; “Effect on Mold wall thickness, thermal conductivity of molding material and inoculation on structure – properties of grey cast iron” Paper presented in 2nd International conferences on material science, metals and manufacturing, 19-20th Nov, 2012 at Singapore.
 21. B. Venkanna Patrudu, Mohammad Nadeem Bhat and Kamlesh Kumar Singh ; Minimization of micro porosity and dross formation in aluminum alloy wheel casting by proper melt treatment and charge quality, Paper presented in 61th Indian Foundry Congress held on 27 – 29 Jan, 2013 at Kolkata.
 22. Nikhil Yadav and Kamlesh Kumar Singh; Effect of process parameters on surface roughness and porosity defect in casting produced using expendable polystyrene pattern; Paper presented in 61st Indian Foundry Congress, held on 27-29 Jan, 2013 at Kolkata.
 23. Rajat Upadhyaya and Kamlesh Kumar Singh, Effect of austempering variables on mechanical properties of austempered ductile iron, presented in International Symposium NMD-ATM in IIT-BHU, Varanasi (2013).
 24. Rajat Upadhyaya and Kamlesh Kumar Singh, Effect of inoculation and mould materials on the structure-properties of thin wall ductile iron, presented in International Symposium NMD-ATM in College of Engineering, Pune (2014).

25. Nadeem Bhatt and Kamlesh Kumar Singh; Effect of Inoculants and wall thickness on structure- properties of spheroidal graphite cast iron: 62nd Indian Foundry Congress, held on 7-9 Feb, 2014 at Ahmedabad.
26. Rajat Upadhyaya, Rahul Kumar and K. K. Singh: Recent practices in induction melting; The 2014 Look East Steel Conference, Ranchi, March 9th, 2014 organized by The Institute of Indian Foundrymen – Eastern Region and Ranchi Chapter in Association with NIFFT Ranchi.
27. Rajat Upadhyaya, Rahul Kumar and K. K. Singh: Effect of Inoculants and Mold materials on the structure- properties of thin wall ductile iron: NMD-ATM- 2014, 14-16 Nov, 2014 at Pune.
28. M.K. Jha, Sidharth and K. K. Singh; Sodium Silicate based casting; Technika- 2015. 18-20 Jan, 2015 at N.I.T. Jamshedpur.
29. M.K. Jha, B. Dash. H. Agrawal and K.K. Singh; Mechanical properties of Bi-Metals; Behind the teacher Desk- 2015, 9-10 April, 2015 at N.M.L. Jamshedpur (Got first prize in paper presentation)
30. Rajat Upadhyaya and Kamlesh Kumar Singh, Effect of section thickness on the structure-properties of thin wall ductile iron, presented in International Symposium NMD-ATM in IIT Kanpur, 2016
31. Rajat Upadhyaya, K.K. Singh, Rajeev Kumar and M Chandran Sharan, Study on the effect of austempering temperature on the Structure-Properties of Thin Wall Austempered Ductile Iron, presented in International Conference on Materials, Manufacturing and Modeling ICMMM-2017(9-11March 2017|VIT-Vellore).
32. Rajat Upadhyaya and K.K. Singh, Effect of some inoculation on the structure-properties of thin wall ductile iron, presented in 7th International Conference Material Processing and Characterization ICMPC-2017(17-19 March 2017|HYD-TELANGANA).
33. Rajat Upadhyaya, Kamlesh Kumar Singh and Rajeev Kumar, Microstructure and Mechanical Properties of Thin Wall Ductile Iron presented in 3rd International conference on ‘Advances in Steel, Power and Construction Technology ‘March 22-23, Raipur 2017
34. Rajat Upadhyaya, Kamlesh Kumar Singh and Rajeev Kumar, Effect of Heat Treatment Parameters on the Characteristics of Thin Wall Austempered

Ductile Iron Casting presented in International Conference on Recent Advances in Materials, Mechanical and Civil Engineering ICRAMMCE-2017(1-2 JUNE 2017|HYD-TELANGANA).

35. Nadeem Bhatt, D.M. Afzal and Kamlesh Kumar Singh; Effect of inoculation and nodularization treatment temperature on Recalescence and eutectic under-Colling temperature in spheroidal graphite cast iron: International Journal of cast metals research (Taylor and Francis), held on 25th Jan, 2018 at N.I.T. Srinagar.
36. Nadeem Bhatt, D.M. Afzal and Kamlesh Kumar Singh; Effect of preconditioning and inoculation graphite nodule count and their size distribution in spheroidal graphite cast iron. A study to minimize rejection of castings due to shrinkage porosity; International Journal of metal casting (Springer American Foundrymen Society, held on 5th April, 2018 at N.I.T. Srinagar.

Membership of Scientific and Professional Societies:

1. Member of “The Institute of Indian Foundrymen” (from Jan. 1999)
 - A. Remained Hony. Treasurer of The Institute of Indian Foundrymen, Ranchi Chapter from May 1999 to May 2001.
 - B. Remained Hony. Secretary of The Institute of Indian Foundrymen, Ranchi Chapter from May 2002 to May 2004.
 - C. Vice-Chairman of IIF Ranchi Chapter from May 2010 to May 2011.
 - D. Chairman of The Institute of Indian Foundrymen, Ranchi Chapter from May 2011 to April 2013.
 - E. Chairman, Eastern Region of The Institute of Indian Foundrymen, Ranchi Chapter from Oct 2013 to April 2014.
 - F. National Vice-President (Technical) of Indian Foundry Organization from May 2015 till date.
2. Life Member of “The Institute of Metals” (from March 2003).
3. Life member of The Institution of Engineers (from 2015)

List of Conferences, Short-term Courses etc. organized/participated:

A. Orientation programme / short term courses attended

1. Attended one orientation program for young Engineering teachers on 21-30th June 1999 at Center for Advanced Studies on Emerging Technologies at Hyderabad.
2. Attended a continuing education course on “Metallurgy for Engineers” at NML Jamshedpur, Conducted by IIM, Jamshedpur & NML on 21-23rd Jan. 2003.
3. Attended a continuing education course on “Casting design and analysis” at I. I. T. Powai, Mumbai from 10-14th September 2004.
4. Attended software training on “Multivariate Data Analysis level I (MVAI) and Design of Experiment (DOC)” 11-13 Jan., 2007, NIFFT, Ranchi

B. Short Term Courses conducted:

1. Technology of Grey & S.G. Iron Castings (05 – 09th Nov. 2001, NIFFT, Hatia, Ranchi, India) - As course Director conducted this refresher course.
2. Moulding & Core Making Practices for Quality Ferrous Castings (23-27 July 2001, NIFFT, Hatia, Ranchi, India) - Taken Classes and Laboratories.
3. Technology of Graded Grey Iron & S.G. Iron Castings (25-29th Nov. 2002, NIFFT, Hatia, Ranchi, India) - As course Director conducted this refresher course.
4. Technology of Molding & Core Making for Quality Castings (17-21st June 2002, NIFFT, Hatia, Ranchi, India) - Taken Classes and Laboratories.
5. Moulding and Core making practices for quality castings (8-12th Dec. 2003, NIFFT, Hatia, Ranchi, India) - Taken Classes and Laboratories.
6. Technology of Grey Iron & S.G. Iron Castings (29-11-2004 to 03-12-2004, NIFFT, Hatia, Ranchi, India) - As course Director conducted this refresher course.
7. Technology of Grey Iron & S.G. Iron Castings (17-10-2005 to 21-10-2005, NIFFT, Hatia, Ranchi, India) - As course Director conducted this refresher course.

8. Technology of Gating and Feeding of Ferrous castings (21.11.2005 to 25.11.2005 at NIFFT, Ranchi, India)- classes and Lab. taken.
9. An advanced approach in Mouldings and Core Making Practices for production of quality Castings (12.12.2005 to 16.12.2005 at NIFFT, Ranchi, India)- classes and Lab. taken.
10. As a Programme Coordinator organised a Unit Based Programme on “Casting and Forging Technologies for Mahindra & Mahindra” 13th -17th November 2006 at NIFFT, Ranchi
11. As a Programme Coordinator organised a Unit Based Programme on “Casting and Forging Technologies for Mahindra & Mahindra” 09th- 13th April 2007 at NIFFT, Ranchi.
12. Classes and Lab taken in the unit-based course on “Advanced approach in Mouldings and Core Making Practices for production of quality Castings” for Durgapur Steel Plant (7.05. 2007 to 25.05.2007 at NIFFT, Ranchi, India).
13. Technology of S.G. Iron Casting and Heat Treatment (22-10-2007 to 26-10-2007, NIFFT, Hatia, Ranchi, India) - As course Director conducted this refresher course.
- 14 Classes and Lab taken in the Refresher course on “Casting Practices for Grey and S. G. Iron” held on 27-31 July, 2009 at NIFFT, Ranchi

C. Conferences/workshop/Technical meetings Organised:

1. Seminar on Challenges and Opportunities of Indian Foundry Industries: 12th Jan. 2002 at National Institute of Foundry & Forge Technology, Organised by I. I. F. Ranchi Chapter. (Chief Guest: His Excellency Sri Prabhat Kumar, Hon’ble Governor of Jharkhand).
2. As a secretary of IIF Ranchi Chapter, organized the “Workshop on Energy and Environment”: 2nd June 2002 at Hotel Yuvraj Palace, Ranchi, Organised by I. I. F. Ranchi Chapter. (Chief Guest: Sri R. V. Shahi, Secretary, Power, Govt. of India).
3. As a secretary of IIF Ranchi Chapter, organized the, “National Foundry Day Celebration”: 17th August 2002 at Hotel Ranchi Ashok, Ranchi, Organised by I. I. F. Ranchi Chapter. (Chief Guest: Sri G. Krishnan, Chief Secretary, Govt. of Jharkhand).

4. As a secretary of IIF Ranchi Chapter, organized the, “Round Table Meet on Confidence Building”: 8th Sept. 2002 at Hotel Ranchi Ashok, Ranchi, Organised by I. I. F. Ranchi Chapter. (Chief Guest: Dr. A. Mishra, Principal, N. I. T. Jamshedpur).
5. As a secretary of IIF Ranchi Chapter, organized the, “Round Table Meet on Enviro-Tech”: 5th Oct. 2002 at National Institute of Foundry & Forge Technology, Organised by I. I. F. Ranchi Chapter. (Chief guest: Sri J. N. Sinha, NTPC, New Delhi)
6. As a secretary of IIF Ranchi Chapter, organized the, “Technology Vision and Vendor Development for SSI”: 14th Nov. 2002 at Hotel Ranchi Ashok, Ranchi, Organised by I. I. F. Ranchi Chapter. (Chief guest: Sri Inder Singh Namdhari, Hon’ble Speaker, Jharkhand assembly)
7. As a secretary of IIF Ranchi Chapter, taken part in organizing the “Jharkhand Udyog Mela –2002”: 15-20th Nov. 2002 at Morahabadi Maidan, Ranchi, I. I. F. Ranchi Chapter associated in organising. (Chief Guest: Sri Lal Krishan Advani, Depty Prime Minister, Govt. of India).
8. As a secretary of IIF Ranchi Chapter, organized the, “Jharkhand Trade and Technology Show”: 10-12th Jan. 2003 at N. I. T. Jamshedpur, Organised by R. I. T. Alumni Association in association with I. I. F. Ranchi Chapter.
9. As a secretary of IIF Ranchi Chapter, organized the, “Global Education”: 15th Jan. 2003 at National Institute of Foundry & Forge Technology, Ranchi, Organised by I. I. F. Ranchi Chapter. (Chief guest and Key note speaker: Prof. Chittaranjan Sahay, Hartford Univ., USA)
10. As a secretary of IIF Ranchi Chapter, organized the, “National Foundry Day Celebration and workshop on resurgent of foundry industries”: 17th August 2003 at National Institute of Foundry & Forge Technology, Ranchi, Organised by I. I. F. Ranchi Chapter. (Chief Guest: Dr. S. S. Kushwaha, Vice-Chancellor, Ranchi University).
11. As a secretary of IIF Ranchi Chapter, organized the, “Two days seminar on Powering Jharkhand”: 6-7th Sept. 2003 at National Institute of Foundry & Forge Technology, Ranchi, Organised by I. I. F. Ranchi Chapter. (Chief Guest: His Excellency, Sri Ved Marwah, Hon’ble Governor of Jharkhand).

12. As a secretary of IIF Ranchi Chapter, organized the, “National Seminar on Environment-Friendly Industries – Today & Tomorrow (EFITT 2003)”; 8-9th Nov. 2003, Ranchi, India, Organised by Indian Institution of Plant Engineers. (Chief Guest: Dr. S. S. Kushwaha, Vice-Chancellor, Ranchi University).
13. As a secretary of IIF Ranchi Chapter, organized the, “National Convention on Power vantage Jharkhand” on 6th Dec. 2003 at IICM, Kanke, Ranchi, Organised by I. I. F. Ranchi Chapter. (Chief Guest: Sri Lal Chand Mahto, Energy Minister, Govt. of Jharkhand).
14. As a secretary of IIF Ranchi Chapter, organized the Workshop on “Industry-Institute cooperation for Energy Jharkhand” on 20th Feb. 2004 at NIFFT, Ranchi; Organised by I. I. F. Ranchi Chapter. (Chief Guest: Sri G. Krishnan, Chairman, State Finance commission, Jharkhand).
15. As a secretary of IIF Ranchi Chapter, organized the, “National Convergence on Electricity act-2003: Tilt towards Hydropower”; on 18th April 2004 at RDCIS, Ranchi. Organised by I. I. F. Ranchi Chapter. (Chief Guest: Smt. Laxmi Singh, Chief Secretary, Govt. of Jharkhand).
16. As a secretary of IIF Ranchi Chapter, organized the Workshop on “Upswing in Foundry Industries” on 15th May 2004 at Hotel Capitol Hill, Ranchi. Organised by I. I. F. Ranchi Chapter. (Chief Guest: Er. R. T. Singh, GM (Manf.), TATA MOTORS, Jamshedpur).
17. As a organizing Secretary, organized the Workshop on “Foundry beyond Boundary” on 17th August 2004 at NIFFT, Ranchi. Organised by I. I. F. Ranchi Chapter. (Chief Guest: Dr. S. K. Mukherjee, Vice-chancellor, B. I. T. Mesra, Ranchi.).
18. As a organizing coordinator, organized the Workshop on “South Asia Energy conservation conclave concept” on 8th September 2004 at Hotel Ashok Ranchi. Organised by I. I. F. Ranchi Chapter. (Chief Guest: Sri Ved Marwah, Hon’ble Governor of Jharkhand).
19. As a chairman press & media liaison committee organised the National Seminar on “Potential of Sponge Iron in Indian Steel Industry” on 29-30th January 2005 at RDCIS auditorium, Ranchi, India. Organised by I. I. F. Ranchi Chapter. (Chief Guest: Sri Anwaral Hoda, member Planning Commission, Govt. of India).

20. As a workshop Director, Organised a “World Workshop on Foundry, Forge and Forming (wwfff05)” on 17-18th August 2005 at NIFFT, Ranchi, India. Organized by NIFFT in association with IIF Ranchi Chapter. (Chief Guest: Sri U. N. Panjiar, I.A.S., Director General, National Productivity Council, Govt. of India).
21. As a programme co-ordinator organised the curtain raising of “South Asia Energy Conservation Conclave” on 16th Feb. 2006 at NIFFT, Ranchi, India; organised by IIF Ranchi chapter in association with NIFFT, Ranchi. (Chief Guest: Mr. Dago Tshering, Hon’ble Ambassador of The Kingdom of Bhutan to India, Nepal and Japan).
22. As a treasurer and organizer, organised the “South Asia Energy Conservation Conclave” 17-19th Feb. 2006 at Ranchi, India. Organised by I. I. F. Ranchi Chapter. (Patron: Lord Swraj Paul, Chairman, CAPARO Group, UK).
23. As a Organising Secretary, organised the Workshop on “Technical Education in National Scenario”, December 20-21st, 2006 at NIFFT, Ranchi, India. Organised by NIFFT, Ranchi.
24. As an organizing Secretary, Organised the National Seminar on “Energy Efficiency in Foundries and Secondary Steel Sectors” August 17-18th, 2007 at NIFFT, Ranchi. Organised by NIFFT, Ranchi in association with IIF Ranchi Chapter.
25. As a member, publication, press & Media, involved in the organizing of National Seminar cum Exhibition on “Need for Vocational education & Training in Jharkhand” held on 9-10 sept., 2008 at NIFFT, Ranchi.
26. As a chairman, Registration Committee, organized the “International conference on Earth, Energy and Engineering” on 24-25, October 2008 at Ranchi. Jointly organized by IIF Ranchi Chapter, MHRD Network Ranchi and Institution of Engineers (India), Ranchi center.
27. As a member of Technical Committee, involved in organizing, the “57th Indian Foundry Congress, Kolkata, India, held on 13-15th Feb., 2009.
28. On 11th Feb 2011, along with the high-level delegation of Energy Saving commission, World Foundry Organisation, visited to Hon’ble Governor of Haryana, India, HE Shri Jagannath Pahadia for making sincere efforts to energy saving in Foundry Industries

29. National Foundry Day Celebration was held on 17th Aug, 2011 at NIFFT Hatia Ranchi the program was co- ordinate by Dr. K.K. Singh Chairman IIF Ranchi Chapter.
30. As a chairman, IIF Ranchi Chapter, involved in organizing the two days seminar on “Energy Conservation Conclave- Focus on Foundry and Steel SMEs, schedule to be held on 14-15th Jan. 2012 at Hotel Radisson, Blue, Ranchi. Organized by IIF Ranchi Chapter and The Institution of Engineers, Jharkhand Center.
31. As a chairman, IIF Ranchi Chapter, organized the road show of 61st Indian foundry Congress, Kolkata and National Foundry Day Celebrations held on Aug 23rd, 2012 at Hotel Chanakya BNR, Ranchi.
32. As a co- chairman of the technical paper selection committee and also the co-chairman of the technical paper presentation committee involved in organizing the 61st Indian Foundry Congress, held on 27- 29 Jan, 2013 at Kolkata.
33. As a organizing chairman, involved in organizing the National Foundry Day Celebration and workshop and R&D policy in steel and foundry sector on 17th Aug, 2013 at NIFFT Ranchi. Organized by IIF Ranchi chapter in association with NIFFT Ranchi.
34. As a chairman Eastern Region, IIF involved in organizing the “The 2014 Look East Steel Conference” on 9th March 2014 at Radisson Blu, Ranchi organized by IIF Eastern Region Ranchi Chapter in association with NIFFT Ranchi.
35. As a Panelist, participated in “Indian Foundry Technology and Innovation meet” held on 11th April, 2016 at Hotel The Lalit, Mumbai and organized by IFO.
36. As a moderator of the Inaugural session participated in “Indian Foundry Convention & Exhibition, IFCON, East 2017 on 3-4th February, 2017 at ITC Sonar, Kolkata and organized by IFO.
37. Chairman Registration Committee of “National Conference on Emerging Technologies in Foundry and Forge”, Nov., 25-26, 2016 at NIFFT, Ranchi

Industrial services/consultancy/R&D Project:

1. Development of high strength to weight Ratio materials for body of Unmanned under water vehicle under the ministry of Earth Science by Dr. Sudipto Ghosh, Dr. C.S. Kumar, Dr. S.C. Panigrahi, Dr. N.R. Mandal, I.I.T. Kharagpur, Dr. P. Padhi, Kalign institute of science and technology Bhubaneswar, Dr. K. K. Singh, Dr. Amitesh Kumar, National Institute of Foundry and Forge Technology, Ranchi – Total cost of project 75 Lacks.
2. Modeling and Simulation of Lead alloy solidification and experimental validation; Board of Research in Nuclear Science, Department of atomic energy Govt. Of India; PI: Dr. Amitesh Kumar, Co- PI; Dr. K.K. Singh, NIFFT Ranchi.
3. Has taken the 4th year students of B.Tech to Tata Steel Jamshedpur on 16th Aug, 2012 for Industrial visit and also visited the Tata Metaliks on 17th Aug 2012 to see the plant and discuss about the modalities for consultancy/ Project for productivity improvement of pig iron.
4. Has gone to Indore on 8-9th Nov, 2012 for consultancy work of Eicher Motors the total consultancy fee earned Rs. 2 Lacks.
5. As Institute nominee attended the first mitting of the steering committee for conducting Technology foresight on the topic “Introduction of low cost automation for different process in the Howrah Foundry cluster held on 06th March 2013 TIFAC New Delhi.
6. Have gone to RWP Bela on 5-6th April 2013, for pre- consultancy work of Rail wheel plant Bela Bihar,
7. For Three days consultancy on molding casting defect and prevention has been completed by DR. K. K. Singh and DR. Amitesh Kumar for Toyo Roll Jamshedpur on 11-13th July 2014. The consultancy charge – 1.25 lacks.
8. Two days (24-25th July 2014) consultancy on Foundry Technology for Coimbatore foundry cluster was completed by Dr. K.K. Singh Dr. Amitesh Kumar total consultancy fees- 2.75 Lacks sponsored by UNIDO.

9. Two Days (4-5th Aug 2014) consultancy on Foundry Technology for Belgaum foundry cluster was completed by Dr. K.K. Singh Dr. Amitesh Kumar total consultancy fees- 2.75 Lacks sponsored by UNIDO.
10. Five Days (15-19th Dec 2014) consultancy on Foundry Technology and Quality control for Rail wheel plant Bela, Bihar was completed by Dr. K.K. Singh Dr. A.K. Singh total consultancy fees- 2.5 Lacks
11. Five Days (13-17th Jan 2015) consultancy on Foundry Technology and Quality control for Rail wheel plant Bela, Bihar was completed by Dr. K.K. Singh Dr. A.K. Singh total consultancy fees- 2.5 Lacks
12. Five Days (27-31th Jan 2015) consultancy on Foundry Technology and Quality control for Rail wheel plant Bela, Bihar was completed by Dr. K.K. Singh Dr. A.K. Singh total consultancy fees- 2.5 Lacks
13. Consultancy on “Melting, moulding, heat treatment and quality control of various types of castings” (07/11/2016 to 11/11/2016); Taken by Dr. K. K. Singh and Dr. A. K. Singh; CASTAMET PVT. LTD., Kharwa, Ajmer, Rajasthan; consultancy charge of Rs. 4.0 Lacks.
14. Consultancy on Project on “Development and Characterization of high phosphorous cast iron” is in progress from October, 2016. Taken by Dr. K. K. Singh. Consultancy Project funded by TATA STEEL JAMSHEDPUR, Consultancy Project cost of Rs. 7.5 Lacks.
15. Consultancy on “Preparation of Detail Project Report for common Facility Center for Bauripur Surgical Cluster, Kolkat, W.B.; Taken by Dr. A. K. Singh, Dr. K. K. Singh and Dr. Amitesh Kumar. The consultancy charge of Rs. 15.0 Lacks.

Industries visited

Tata Motors, Jamshedpur; TISCO, Jamshedpur; TELCON, Jamshedpur; TAYO ROLLS, Jamshedpur; TIN PLATE, Jamshedpur; USHA Martin, Ranchi; CORES India Ltd, Pune; DGP Hinoday Ltd, Pune; Kirloskar Ltd, Pune; Tata Motors, Pune; Maharashtra Seamless Pipe Ltd, Raigarh; Chitaranjan Locomotive, Chitaranjan, Rail Wheel Factory, Bangalore, DCM Foundry Ropar and Swaraj-Mahindra Industry, Punjab.etc.

Computer Exposure

Systems : PC, Graphics Workstations
OS : HP-UX, UNIX, DOS and WINDOWS
Languages : C, C++ and FORTRAN
Software : MS-Office, Pro-Cast and Pro-E.

Personal Details

Father's Name : LATE RAMESHWAR SINGH
Date of Birth : 01-02-1967
Nationality : Indian
Sex : Male
Marital Status : Married

References

1. **Prof. G.S. Murty**
Prof. (Retd.) from I. I. T., Kanpur
Touchstone Research Laboratory Ltd.,
The Millennium Centre,
Triadelphia, WV 26059, USA
E-mail: gsm@trl.com
2. **Prof. A. Ghosh**
Prof. (Retd.) from I. I. T. Kanpur,
3C-Shatabdi; 54/1/1/1 Andul Road
Howrah-711 109; West Bengal. India.
Phone: 91-033-26885548

3. **Prof. B. Ravi**

Department of Mechanical Engineering

IIT Bombay

Mumbai- 400076

E-mail: bravi@me.iitb.ac.in

Phone: 022-25767510; Fax: 022- 25726875

4. **Prof. S. Sangal**

Department of Materials and Metallurgical Engineering

I. I. T. Kanpur, Kanpur- 208016, (U. P.), India

Phone: 91-512-2597167 (O), 91-512-2591493/2598473(R)

Fax: 91-512-2590007 / 2597505

E-mail: sangals@iitk.ac.in

(K.K. SINGH)