



1. Contact Information:

Name: Dr. Baidya Nath Roy
Address: Professor,
Metallurgical Engineering Department.
B.I.T.Sindri, Dhanbad, Govt of Jharkhand, India.
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2. Objective: I am willing to give total support to the organization that I am in, with the experience, capability and innovative approach that I have earned throughout my life, in order to achieve organizations goal and create mutual benefits.

3. Personal Information:

Date of birth: 27/09/1963
Father's Name: Sri Madhusudan Roy
Mother's Name: Smt.Subhadra Devi.
Place of Birth: Deshrajpur (PO-Mahanar, Dist-Vaishali,PIN-844506 Bihar, India.)
Citizenship: Indian
Gender: Male
Marital Status: Married

4. Academic Information:

(a) Ph.D (Feb-2010). Metallurgical Engineering, V.B.University, Hazaribag, India.

Specialization : **Process Metallurgy & Material Engineering.**

Ph.D. Topic "Study of the Effect of Heat Treatment Temperature (HTT) on the Property of Graphite Obtained from Waste Carbonaceous Material for Industrial Applications."

(b) M.Sc. Engineering (2004): Metallurgical Engineering, NIT Jamshedpur, India.

Specialization: **Process Metallurgy.**

(c) B.Sc. Engineering (1983-87): Metallurgical Engineering, RIT Jamshedpur, Ranchi University, Jharkhand, India.

Branch: **Metallurgical Engineering**

5. Present Employment: Professor, Metallurgical Engineering Department, **B.I.T.Sindri**, Dhanbad, Jharkhand, India

(Under **Govt.of Jharkhand**, Department of Higher, Technical Education & skill development)- Since May-2000

6. Employment History:

Working Experience: More than 32 Yrs. (As on 01.08. 2021).

Name of Employer	Address	Designation	Period	Nature of Job
GFL	Jamshedpur, India	Project Engineer	01.10.88— 03.08.95	Supervision of the ongoing Projects running in different steel Plants in Eastern India
Indian Railway	Locomotive Workshop,Jamalpur(Eastern Railway)	C.M.A	04.08.95--- 05.01.99	Failure Investigation, Inspection & Quality Control.
RIT Jamshedpur	RIT Jamshedpur,(NIT.JSR)India	Lecturer (Adhoc)/ contractual	06.01.99--- 6.01.2000	Teaching as a Regular Lecturer in the Deptt. Of Metallurgical engineering on contractual basis for one year.
BIT Sindri	Govt of Jharkhand, Deptt. of Higher & Technical Education, Govt. of Jharkhand	Asstt. Professor (Regular/Permanent).	continuing from 24.05 2000- to 23.05.2013	Asstt.Professor in the Deptt. of Metallurgical Engineering (Promoted to
	-----Do-----	Associate Professor from 24.5.2013 in AGP 9,000/-	24.05.2013 to 23.05.2016	Associate Professor
	-----Do-----	Professor by CAS, AGP 10,000/-	24.05.2016 to 02.10.2017	Professor
	-----Do-----	Professor with AGP Rs.10000-through Commission.	03.10.2017 onward till date continuing---- --	Professor

7. Computer Skills: MS Office,Internet, Programming in C++.

8.Sponsored Project: One

Sponsored by: BRNS/BARC, Mumbai.

Topic: “Effect of damage caused by hydride precipitation and dissolution on tensile properties of Zr-2.5Nb alloy “

Principal investigator of the project: Dr B.N.Roy, Assistant professor, Department of Metallurgical Engineering,
B.I.T.Sindri, PIN-828123

Sanction no. 36(2)/14/14/2016-BRNS.

Total Grant: Rs 31, 82,500/- (Rupees thirty one lakh eighty two thousand five hundred only)

Period: 3 years beginning from financial year 2016-2017

Status: Sponsored Research Project completed Successfully, Completion Certificate Awarded.

9. Publications : International Journals - 24

- I. "Solid waste generation in steel plants and its Reutilization "by S.N.Sinha,M.K.Agrwal,B.N.Roy.Proc.*Intern* Workshop on Environment and waste Management (**EWM-1999**) NML.Jsr. ISSN 0971-9407Pp 177-191.
- II. Precautionary Measures in determining volatile matter in natural coke Washability fractions"byA,Int. J.of Coal Preparation and Utilization,vol-29 ,P34-47,**2009**,ISSN:1939-2699 print/ 1939-2702 online (Tailor & Francis Group).
- III. "Uncertainty in Damage Assessment and Remaining Life Prediction of Engineering Materials Used In Petrochemical Industry" Int.J.of Petroleum &Environmental,Biotechnology,Vol 5,Issue 4 (2014).ISSN 2157-7463.Ray & Roy et al., J Pet Environ Biotechnol**2014**, 5:4 <http://dx.doi.org/10.4172/2157-7463.1000>
- IV. "Structural integrity of service exposed primary reformer tube in petrochemical industry", in International Journal of Pressure Vessels and Piping,<http://dx.doi.org/10.106/j.ijpvp>.**2015**.10.003,ISSN::0308-0161,Corresponding Author: Ashok Ray A.K.Ray,NilimaRoy,AnantRaj, B. N Roy.
- V. "Comparative Study of Conventional and Hybrid Microwave Sintering of Aluminium and Maganesium based Nanacomposites." S.Hembrom,B.N.Roy,G.Kumar,published in International Journal of Engineering Technology ,Management and Applied Sciences,Vol.3,Issue 8,(**2015**)ISSN :2349-4476,p143-147.
- VI. "Life Estimation and Creep Damage Quantification of Service Exposed Reformer Tube",A.Raj,N.Roy,B.N.Roy&A.K.Ray.,published in High Temp.Mater.Processes.**2015**;ISSN :1093-361134(7):731-742.
- VII. "Creep Deformation and Damage Evaluation of Service Exposed Reformer Tube", N.Roy, A.Raj,B.N.Roy&A.K.Ray.,published inCanadian Metallurgical Quarterly,ISSN:0008-4433,(**2015**),vol.54,No 2,205-222.
- VIII. "Studies on Amorphos Alloys Dispersed Aluminium Matrix Composite Prepared by High Pressure Torsion"S.Hembrom,B.N.Roy,N.Khobragade&D.Roy,ISSN:1927-0585 E-ISSN 1927-0593, International Journal of Material Science Research;Vol.5,No.1;**2016**,pp 89-96.
- IX. "Studies on Mechanical properties of Al base nanocomposite".Int. J. of Scientific and Engineering Research.ISSN-2229-5518.(2016)Vol-7,Issue-2,Feb.**2016**,pp528-535.
- X. "Study of Rate of Corrosion by high CO₂on pressurepipeline made of Steel".Int.J.of Technical Research and Application ,e-ISSN:2320-8163,www.ijtra.com,Vol-4.Issue-2(March-April,**2016**)pp.267-270
- XI. Visualization of Dross Movement during Galvanizing of Steel.Int.J.of. Technical Research and Application, e-ISSN: 2320-8163, www.ijtra.com, Vol-4.Issue-2(March-April, **2016**) pp.148-152.
- XII. "Quality Improvement in Finished Cold Rolled Sheet by reducing the defect"International Journal of Scientific & Engineering ResearchISSN:2229-5518,Vol-7,Issue3,March-**2016** pp-595-602
- XIII. " Study of Influence of stressed corrosive environment on the Austenitic Stainless Steel", International Journal of Development Research,Vol.06,Issue,07,pp8447-8450,July,**2016**.
- XIV. "Conversion of Electronic wastes into Valuable Metallic wealth for green Environment",International Journal of Innovations in Engineering and Technology,ISSN: 2319-1058,Vol,7,Issue-2,pp2934,August **2016**.
- XV. "Study of Graphine as a smart materials through Nanotechnology-Aglobal Challenge",Global Journal of Engineering Science and ResearchesISSN: 2348-8034 (**2016**) pp 81-86
- XVI. "Future of Shape Memory Alloy and its Utilisation", International Journal of current research,ISSN:0975-833X,Vol-8,Issue-05(May **2016**),pp.31646-31651.

- XVII. "Effect of Al₂O₃ on Mechanical properties of Al-Matrix Nano-composite", International Journal of Trend in research and Development,ISSN:2394-9333, Vol-3(3),Issue-03,(2016)pp. 609-611.
- XVIII. Conversion of rolling mill scale into sponge iron powder,international journal of current research,ISSN:0975-833X , volume 8 issue 05 pp 31348-31351,May 2016
- XIX. Studies on influence of liquid level on blast furnace performance and monitoring of hearth drainage,international journal of latest trends in engineering and technology, volume-8 issue-1 ,pp 051-057 , 2016 e-ISSN:2278-621X
- XX. Study of pitting corrosion behaviour of austenitic stainless steel, open journal of engineering research and technology,vol- 1 issue -1(2016) ,pp 50-58
- XXI. Effect of scale-up ,design and processes parameters on the productivity of ancient iron making processes and recovery of iron in the product, journal of metallurgy and material science, vol-58 , No-4, Oct- Dec 2016, pp 191-199 ISSN:0972-4257
- XXII. Study of steel from sponge iron-at a glance, international journa of engineering science and computing,july2017,ISSN:2321-3361,volume 7 issue no. 7 pp 14104-14107
- XXIII. Studies of demineralized water for industries , international journal on trend in research and development, vol- 4(1), ISSN:2394-9333, pp-614-618 , Jan-Feb 2017
- XXIV. Effect of quality of raw materials on the quality of sponge iron manufactured in laboratotry , international journa of innovation in engineering and technology, Feb-2017, vol-8 issue-1, (2017)pp 361-368, ISSN:2319-1058
- XXV. Electrical-Discharge Machining of Tungsten Carbide (WC0 and its composites (WC-Co) - A review, available online at www.sciencedirect.com/Materials Today: Proceedings 5(2018)24760-24769.

10. Publications in National Journals : 05

- I. Influence of HTT on physico – mechanical properties of synthetic graphite for specific industries” National Journal, MINTECH, vol.29, No-2, P35-48.
- II. “Smelting of sponge iron fines for the production of steel grade iron
”B.N.Choudhary,B.N.Roy,A.K.Vaish&S.D.Singh,Published in Journal of Metallurgy and Material Science, ISSN-0972-4257,Vol.56,No. 2,April-June 2014,pp 107-116.
- III. Resource, Energy and environment: A Thermodynamic Approach “.On the occasion of All India seminar on REENT ADVANEMENT IN MANUFATURING AND ITS MANAGEMENT (RAMM -14) FEBRUARY 07-08, 2014 ORGANIZED BY Institution of engineers (India),Dhanbad local centre in association of B.I.T.Sindri).
- IV. Problems and solutions of Lean grade ores and ore fines” in National seminar on Exploitation of Lean grade ore, Ore fines Urban Ores: Challenges, problem and Solution, LGO-2013and 26th National Convention of Metallurgical and material Engineers at NML. Jamshedpur during 22-23 Jan-2013.
- V. **Smelting of sponge iron fines of rotary kiln for the prodduction of foundary grade iron, transaction of 64thIFC,Coimbatore(2016, pp 49-55).**
- VI. **Effect of Asymmetric Gas Flow Rate in Stirring in Steel Ladles, published in UGC approved Journal,Complince Engineering Journal,ISSN:0898-3577,VOL-11,Issue-11,2020,pp 150-159.**

11. Presentation in National/International Seminar/Workshop/Conferences: 23

- I. “Reduction in Raw material consumption during sintering by the use of steel plant solid waste”, N by U.S.Yadav,B.N.Roy ,MD-ATM 2005, IIT Chennai.
- II. “National workshop on Technological Excellence through Value Engineering under TEQIP, 7th April-2007.
- III. Role of creative Method to Technical and Industrial Problem” ,by A.P.Burnwal,B.N.Roy,Proc. Of NWIII-2007, P71-82. At BIT Sindri, Jul-13-14, 2007.
- IV. **PROCEEDING** Role of creative Method to Technical and Industrial Problem” Proc. Of NWIII-2007, P71-82. At BIT Sindri, Jul-13-14, 2007.

- V. "Prospect of Jhama coal of Damodar Valley coal field of India for its industrial application", by B.N.Roy, Proc. National Seminar on Technological challenges of 21st century- The road Ahead under TEQIP at B.I.T.Sindri, Feb.2008.
- VI. "State of art in graphitization of carbonaceous materials" ,by A.K.Singh,B.N.Roy,Invited lecture, National Workshop on modern carbon products and processing, Indian Carbon Society, at NPL, New Delhi,) on 03 Mar-2008.
- VII. "National seminar on Environmental issue on Geotechnics and Mineral Industries from 4-5 April 2008 at BIT Sindri, Dhanbad.
- VIII. "Active role to be played for the flate rolling practices in India", by B.N.Roy ,Proc. National Workshop on Emerging trends in flate rolling –Processes & Products, on 14th Nov.2008, BSL, Bokaro.
- IX. **PROCEEDING**" A step toward combating nuclear waste ", INCO – 2012, B.I.T.Sindri. National seminar on Indian nuclear power programme: Challenges and Opportunities" april14-15, 2012.
- X. **PROCEEDINGS,(EES-2013)**"Alternative ways and means for safer, cheaper energy & green revolution", EES-2013, Energy and Environment Susaptibility, March, 16-17, 2013 held in BIT Sindri.
- XI. PROCEEDING,"Present status of refractory industries in our country", National workshop on Technological Up- gradation of Down-draught Kilns and Sustainability of Indian Refractory Industry" on October 25, 2013 at CIMFR, Digwadih Campus, Dhanbad.
- XII. **Proceedings of national convention,(LGO-2013)** "Problem & Solution of Lean grade ores & ore fines". LGO 2013 held in N.M.L.Jamshedpur, Proc. Of 26th National convention of Metallurgical & Materials engineers. Proc. Of 26th National convention of Metallurgical & Materials engineers and National Seminar on exploitation of lean Grade Ore, ore fines & Urban ores: Challenges ,problem & Solution on 22-23 Jan,2013 at NML Jamshedpur. www.lgo2013.weebly.com
- XIII. "Smelting of sponge iron fines for the production of steel grade iron"B.N.Choudhary,B.N.Roy,A.K.Vaish&S.D.Singh,Published in Journal of Metallurgy and Material Science, ISSN-0972-4257,Vol.56,No. 2,April-June 2014,pp 107-116.
- XIV. "Resource, Energy and environment: A Thermodynamic Approach "by .On the occasion of All India seminar on REENT ADVANEMENT IN MANUFATURING AND ITS MANAGEMENT (RAMM -14) FEBRUARY 07-08, 2014 ORGANIZED BY Institution of engineers (India),Dhanbad local centre in association of B.I.T.Sindri).
- XV. "Post Industrialization Environment", on the occasion of World Environment Day 2014,June 05,2014,Jontly organized by Institution of Engineers (Dhanbad Local Chapter) & BIT Sindri, Proc.of World Environment Day 2014,Page 45-50.
- XVI. "Towards a way to improve the water scarcity on earth". by B.N.Roy ,Worldwater day 2014, jointly organized by Inst.of Engineers & B.I.T.Sindri.
- XVII. "Green Environment through steel plant solid waste management", National Seminar on Environment, Conservation and Management on Feb 26-27, 2016 in B.I.T.Sindri ISSN: 978-93-85777-28-8 page no-75-81.
- XVIII. "Fluoride toxicity in Indian sub-continent-A Review" , National Seminar on Environment, Conservation and Management on Feb 26-27,2016 in B.I.T.Sindri ISSN : 978-93-85777-28-8 Page no101-109.
- XIX. "Study of the role of green technology to overcome ozone depletion related problem", National Seminar on Environment, Conservation and Management on Feb 26-27, 2016 in B.I.T.Sindri ISSN: 978-93-85777-28-8 Page no 133-138.
- XX. "Study of Graphene as a smart Materials through Nano Technology-A global challenge"...pp 81-86"National Conference on Recent Trends in Nano Technology". Held on 26-27th March, 2016 in GWP Ranchi ,sponsored by Jharkhand Council on Science and Technology,ranchi. ISSN:2348-8034
- XXI. "Steel Plant Waste Management and Environmental Pollution –at a glance". "National Conference on Recent Trends in Waste Management" sponsored by Jharkhand Council on Science and Technology, held on 10/04/2016 in GWP Ranchi.
- XXII. National conference on Advances in Structural Material ,16th -17th Dec 2016 in NIFFT,Ranchi
- XXIII. International Conference ,ICAMM-17 ,International Conference in Advances in Materials and Manufacturing , 19- 21 Jan 2017 in NIFFT,Ranchi

12. Short Term Courses Attended: Total 21- Weeks

- I. 02 weeks course on ISTE sponsored “productivity & prosperity through Safety engineering and management during Mar 31st to April, 2001.
- II. 02 weeks course ISTE sponsored “GEO-MINING APPLICATIONS IN MINING AND ALLIED AREAS’ from 29.10.01 to 10.11.2001 at BIT Sindri
- III. Composite material: Fatigue, Fracture and Failure analysis, 6-10th Nov-2006, ISTE, QIP, STTP, IIT, Bombay, [01 Week].
- IV. Selection of Steel for Engineering Application, Feb 12-23, 2007, ISTE, QIP, STTP, NIFFT, Hatia, Ranchi, India. [02 Week].
- V. Programming in C++, June 18-29, 2007, ISTE, QIP, STTP, NITTTR, and Kolkata. [02 Weeks].
Extraction of non-ferrous metals and their recycling (NFTP-2008), 27-29th Feb-2008. [01 Week].
- VI. 02 weeks, Participated in AICTE approved STTP under staff Development programme on selection of Steels for engineering application held at NIFFT Hatia, Ranchi during Feb 12-23, 2007.
- VII. Training related to Teaching Skill Development: Mission 10X by BIPRO, at B.I.T.Mesra, Ranchi. [01 Week]. From 22nd November to 26 Nov. 2010
- VIII. Pedagogy –II, Oct. 14-19, 2008, at BIT Sindri, by Deptt. Of Science and Technology, Govt. Of Jharkhand. [02 Weeks].
- IX. 02 weeks course, ISTE, STTP on “Performance Enhancement Skills”, during July 23 to Aug 03, 2012 at BIT Sindri.
- X. 01 week QIP STTP on “Application of Renewable Energy Sources”, Dec. 11 – 17, 2013 at IIT Delhi .
- XI. 02 weeks course, ISTE, STTP on “Personality Development”, during Oct 26 to Nov 06, 2015 at BIT Sindri.
- XII. **02 weeks** course, ISTE, STTP on “Institutional Development”, during 20 June 2016 to 01 July 2016 at NITTTR Kolkata.
- XIII. 01 week course, STTP, on “Mineral Processing: principles, processes practice” during June 26th – July 01st , 2017 at Faculty Development Centre, IIT (ISM) Dhanbad, Jharkhand, India.

13. Management Training Attended:

- ❖ MDP on Creativity, Problem Solving & Decision making at XLRI, Jamshedpur. held during Dec 11-15, 2006 at IIR MDP Centre Jamshedpur.
- ❖ MDP on Managing Technology and Innovation by XLRI, Jamshedpur, held during Nov 01-02, 2006 at Kolkata.

14. Participation in Other Society Work:

Render valuable service as Member in the panel of Judges in the Jharkhand State level National children Science Congress -2011 held during Nov, 11-13, 2011 at CIMFR, Dhanbad.

15. Member of Professional bodies:

- ❖ **LM of IAENG, International Association of Engineers (LM No-179558)**
- ❖ LM of MGMI, Kolkata – (LM –9505)
- ❖ LM of ISTE, New Delhi. - (LM –82593)

16. Official Interests:

- ❖ Time Efficient, Systematic working, Innovative

- ❖ Rapid adaptability to problem solving.

17. Personal Interest :

- ❖ Reading (marketing communication, Management Psychology, Life Style)
- ❖ Music (**Bhojpuri, Purbi, Nirgun Songs**)

18. Extra Curricular Activities :

Gym, Fitness, yoga, football.

19. Other Activities :

- ❖ As one of the Jury – member s for judging the performance of the regular students upto +2 level of Jharkhand State in DPS, **Bokaro**
- ❖ As a jury member /Judge in the district level Inspire Award Scheme of the district of **Dhanbad**.

20. Teaching Skill:

Teaching of B.Tech as well as M.Tech students in the following Subjects:

- ❖ Foundry Tech.
- ❖ Powder Metallurgy,
- ❖ Material Engineering,
- ❖ FRF,
- ❖ Mineral Processing.
- ❖ Metal Joining Technology
- ❖ Composite Material
- ❖ Thermodynamics etc.

21. Other Achievements:

Administrative:

- ❖ Asstt. Hostel Superintendent in the present Institution from 2000-07
- ❖ Hostel Superintendent in the present Institution from 2007 to 2012.
- ❖ Event Organized and Participated: Organized Science for society in the backward rural area of Sindri and Dhanbad in the capacity of Vice-President of Science for society.
- ❖ Participation at various level of the institutional functions ,Seminars,workshops,short term courses &c.
- ❖ Asstt. Prof- in -charge (Academic)/ Asstt Registrar in BIT SINDRI at present since last 02 Yrs.
- ❖ Pof-in-Charge,Academics(PG & Research)
- ❖ Member of Departmental Research Council (DRC), VBU, Hazaribag, Jharkhand.
- ❖ Member of Disciplinary committee of B.I.T.Sindri.
- ❖ Member of UG Admission committee of B.I.T.Sindri.
- ❖ Member of PG Admission committee of B.I.T.Sindri.
- ❖ Member of Anti-Ragging committee of B.I.T.Sindri.

- ❖ NODAL OFFICER for New Govt Engineering College (GEC) Koderma, Jharkhand since March-2021.

22. Supervisory Skill:

- (a) 11 yrs of industrial supervisory skill before joining in present Institution B.I.T.Sindri.
- (b) Supervision of B.Tech Level projects made by the students for the purpose of getting their Degree.

23. Research Guidance:

- (a) Ph.D - 02 (Completed)
- (b) M.Tech project- 06 (completed)
- (c) B.Tech Project- More than 20 (completed)

24. New Lab Developed:

01, Founder Head of **Nano-Science and Tecnology Lab**, as a central facility lab of the institute B I T Sindri since Jan-2020.

25. Present Responsibility: NBA co-ordinator of Metallurgical Engineering Department of B I T Sindri.

26. Publications in:

[a] International Referred Journal with ISSN No :24

[b] National Journal: 05

27. Paper presentation in National Seminar/Conference/Workshop: 23

28. Major Project amount mobilized with grants above Rs.31.0 Lakh: 01 completed successfully.

29. Keynote Address in national conference: 05

30. Webinar Organized: 01

31. Webinar Attended: 08

References: *Excellent References may be made available on request.*

Signature