

## Bio Data

Name (in capital letters) : **DR. ATANU SAHA**

Date of Birth : **03.01.1970**

Designation : **Principal Scientist**

Awards/ Distinctions, if any : **Metallurgists' Day Award in 2009 from Indian Institute of Metals**

Details of Educational Qualification (from Matriculation onwards):

Exam. Passed	Specialization	Board/University	Passing	Class/Div.
Madhyamik Examination	Math., Phy. Sc., Bio.,Eng.,Beng.,Geo., Hist. Physics ( Add.)	West Bengal Board of Secondary Education	1987	1 <sup>st</sup>
Higher Secondary	Math, Phy, Chem, Bio, Eng, Beng.	West Bengal Council of Higher Secondary Education	1989	1 <sup>st</sup>
B.E (Metallurgical Engineering)	Phy. Met, Ext. Met., Mech. Met., Heat treatment, Materials Characterization	Regional Engineering College, Durgapur (W.B) (Burdwan University)	1993	1 <sup>st</sup>
M.Tech. (Metallurgical Engineering)	Mechanical shaping of metals	National Institute of Technology, Durgapur (W.B)	2005	1 <sup>st</sup>
Ph.D. (Metallurgical Engg.)	Effect of Cyclic heat treatment on microstructure and mechanical properties in various grades of plain carbon steels.	National Institute of Technology, Durgapur (W.B)	2012	From Nov.2009 to Nov.2012

Details of employments:

**a) Industry**

S.No	Name and address of employer	Designation	From	To	Duration	Type of Organization
1.	ABB- ABL Limited, Durgapur Pin- 713206 West Bengal	Asst. Engineer	Aug, 1993	June, 1997	4 Years	Power plant equipments mainly Boiler and Pressure vessel manufacturing organization

**b) CSIR-CMERI, Durgapur**

S.No	Name and address of employer	Designation	From	To	Duration
1.	CSIR- Central Mechanical Engg. Research Instt. M.G. Avenue, Durgapur, Pin- 713209	Scientist-B , Gr. IV(1)	12 <sup>th</sup> June, 1997	31 <sup>st</sup> Dec, 2001	4 Years
2.	CSIR- Central Mechanical Engg. Research Instt. M.G. Avenue, Durgapur, Pin- 713209	Scientist-C , Gr. IV(2)	1st Jan. 2002	31st Dec,2006	5 Years
3.	CSIR- Central Mechanical Engg. Research Instt. M.G. Avenue, Durgapur, Pin- 713209	Senior Scientist, Gr. IV(3)	1st Jan. 2007	31st Dec,2010	4 Years
4.	CSIR- Central Mechanical Engg. Research Instt. M.G. Avenue, Durgapur, Pin- 713209	Principal Scientist Gr.IV(4)	1st Jan. 2011	Till Date	5 Years

## RESEARCH PUBLICATIONS:

- Development of high strength ductile eutectoid steel through cyclic heat treatment involving incomplete austenization followed by forced air cooling: Alok Mishra, **Atanu Saha** and Joydeep Maity, Publication in Materials Characterization, Elsevier, Vol. 114, 2016, page 277 – 288.
- Boiler tube failures – Some case studies, Book chapter 00003, ISBN No. 978-0-08-100116-5, 2016 : **Atanu Saha**, published in Handbook of Materials Failure Analysis with Case Studies from the Chemicals, Concrete and Power Industries, Elsevier.
- Microstructure evolution in AISI 1080 eutectoid steel under cyclic quenching treatment: Alok Mishra, **Atanu Saha** and Joydeep Maity, published in the Journal of Metallography, Microstructure, and Analysis, ASM international, Vol.4, 2015, page 355-370.
- Dry sliding wear behaviour of a novel 6351 Al-Al<sub>4</sub>SiC<sub>4</sub> composite: Manas Mondal, Kaushik Biswas, **Atanu Saha** and Joydeep Maity, published in the Journal of Materials Engineering and Performance, ASM international, Vol. 24, No.2, 2015, page 759 -770, DOI: 10.1007/s11665-014-1366-0.
- Failure investigation of a final super heater tube in a 140 MW thermal power plant: **Atanu Saha**, Himadri Roy and A. K. Shukla, published in the journal of Failure Analysis and Prevention, ASM international, Vol. 15, 2015, page 184- 189.
- Failure of a secondary super heater tube in a 140 MW thermal power plant: **Atanu Saha** and A.K.Shukla, published in the Journal of Failure Analysis and Prevention, Vol. 14, issue 1, 2014, page 10-12, DOI: 10.1007/s11668-013-9773-3.
- Failure of a pendent reheater tube in a 110 MW thermal power plant: Atanu Saha, H. Roy & A. K. Shukla, published in the Journal of High Temperature Materials and Processes, Vol. 33, Issue 4, 2014 page 299-304, DOI: 10.1515/htmp-2013-0052.
- Mechanism of accelerated spheroidization of steel during cyclic heat treatment around upper critical temperature: Joydeep Maity, **Atanu Saha**, Dipak Kumar Mondal, Koushik Biswas, published in Philosophical Magazine Letters, Taylor & Francis, Vol.93 No.4 (2013) pp 231-237, DOI: 10.1080/09500839.2012.758390.
- Microstructural modifications and changes in mechanical properties during cyclic heat treatment of 0.16% carbon steel: **Atanu Saha**, Dipak Kumar Mondal, Koushik Biswas, Joydeep Maity, Published in Materials Science and Engineering A, Elsevier, Vol.534 (2012) pp 465-475, DOI:10.1016/j.msea.2011.11.095.

- Development of high strength ductile hypereutectoid steel by cyclic heat treatment process: **Atanu Saha**, Dipak Kumar Mondal, Koushik Biswas, Joydeep Maity published in Materials Science and Engineering A, Elsevier, Vol.541 (2012) pp 204-215, DOI :10.1016/j.msea.2012.02.026.
- An alternate approach to accelerated spheroidization in steel by cyclic annealing: **Atanu Saha**, Dipak Kumar Mondal and Joydeep Maity, Published in the Journal of Materials Engineering and Performance, ASM international, Vol. 20, No.1, February, 2011, pp 114-119; DOI: 10.1007/s11665-010-9653-x.
- Effect of cyclic heat treatment on microstructure and mechanical properties of 0.6 wt% carbon steel: **Atanu Saha**, Dipak Kumar Mondal and Joydeep Maity Published in Materials Science and Engineering: A, Elsevier, Vol. 527 (2010) pp 4001-4007, DOI:10.1016/j.msea.2010.03.003.
- Investigation into the probable cause of failure of economizer tube of a thermal power plant: **Atanu Saha**, H. Roy & A. K. Shukla, published in Journal of Failure Analysis and Prevention, Vol.10, Issue 3(2010) Page 187, DOI: 10.1007/s11668-010-9336-9
- Investigation of probable cause of damage of steam drum of naphtha cracking furnace : **A. Saha**, H. Roy , S. Ray, M. Maiti, K. K. Choudhury, A. K. Shukla, J. Basu, published in Engineering failure analysis, ELSEVIER, Vol. 16 (2009) pp 1387- 1396, DOI:10.1016/j.engfailanal.2008.09.018.
- Failure investigation of Platen Superheater Outlet Header”: H Roy, D. Ghosh, P.Roy, **A. Saha**, A.K.Shukla, J.Basu, published in International Journal of Manufacturing Science and Production Vol. 10, No.1, 2009, pp. 17-24.
- Failure analysis of a new turbine parting plane studs”: H.Roy, **A. Saha**, D.Ghosh, P. Roy, A.K.Shukla, published in Journal of Mechanical Behaviour of Materials Vol. 19, No.6, 2009 Page 373 – 381.

## CONFERENCES :

- Failure analysis of H.P Turbine casing studs: **Atanu Saha**, D.Ghosh & A. K. Shukla, in National Conference towards self Reliance in Power, 2003 Durgapur, India.
- Effect of Cyclic Annealing on the development of Grain size, Microstructures and Mechanical Properties of Plain Carbon Steels: **Atanu Saha** & D.K Mondal, in International conference in HSLA Steels in Sanya,Hanian, 8-10 November,2005 China.
- Residual Life Assessment study of boiler components – A case study: **Atanu Saha**, A K Shukla, B.N Singh & K K Chowdhury, in National Conference on Enhancement of Plant Availability by Life Assessment and Condition Monitoring, December 19-20, 2007 Durgapur, India.
- Weld Failure – Some case studies: **Atanu Saha** & A K Shukla, in International conference on Advance Manufacturing Technology, November 29-30, 2007 in Durgapur, India.
- NDT methods employed in weld failures: **Atanu Saha** & P.Sanyal, in National conference on Weld Failure in Kolkata,India.
- Weld failure of a boiler drum: **Atanu Saha** & S. Roy, in National conference on Application of welding in steels in Durgapur, India.
- A case study on NDE techniques for RLA of a 120MW boiler: **Atanu Saha**, H.Roy B.N. Singh & A. K. Shukla, in National conference on Recent Advances in Non-Destructive Evaluation Techniques, January15-16, 2010 in Kolkata, India.
- Application of Laser for in-situ welding of Monel casting to improve multi-stage depressed collector assembly alignment for traveling wave tube: A.J Banerjee, **A.Saha**, B.Sampath kumar, P.Saha, in National Seminar on Application of Laser in Materials processing, January 8-9, 2010 in Kolkata, India.
- Metallurgical Failure Investigation of an In-Service Economizer Tube: Himadri Roy, Debashis Ghosh, **Atanu Saha**, Subrata Ray and Awdhesh Kumar Shukla, in National Seminar on Thermal Power Plant Performance Management – NSTPPPM, Jindal power, Raipur, Chattisgarh, India.

**RESEARCH PROJECTS /CONSULTANCY** : **During last 5 years total research project and industry oriented technical service activities are more than 30.**