

Name : Dr. Ajit Bhaskar Bhandakkar
 Date of Birth: 05/02/1973
 Specialization: Materials Science
 Nationality: Indian
 City: Nasik
 Position: Dy. General Manager, Hindustan Aeronautics Limited, Nasik



2.0 Educational Qualifications:

Year	Institution	Examination/Discipline	Performance
2019-2020	KKSU Nagpur	MA (Yogshastra)	76%
2018	KKSU Nagpur	Diploma (Yogshastra)	75%
2008 -2015	IIT Bombay	Metallurgical engineering and Materials Science(PhD)	9.44/10.00
2006-2008	IIT Bombay	Metallurgical engineering and Materials Science(M.Tech)	9.33/10.00
1999-2000	IIMM, Bangalore	Post Graduate Diploma in Materials Management	75.3 %
1996 -1998	IIMM, Bangalore	Graduate Diploma in Materials Management	65.3 %
1990 to 1994	VNIT Nagpur	Metallurgical engineering (B.Tech)	75.64
1990	Dharampeth Science collage, Nagpur	State Board Education, Pune	80.14 %
1988	Dharampeth Science collage, Nagpur	State Board Education, Pune	81.67 %

3.0 Scholastic Achievements

- Among the top 100 students all over Maharashtra to get selected for the National Merit Scholarship in SSC/HSSC examination.
- Received appreciation for development of rubber diaphragm which can withstand at -60°C under high pressure.
- Received appreciation for highest foreign exchange savings in year 25 Crs. by development of raw materials /components for military aircraft

4.0 Industry Experience

Organization	Position Held	Experience and date
Hindustan Aeronautics Ltd , Nasik	Dy.General Manager (Design Indigenisation and Laboratory)	May 1997 till date 23 Years
Jindal Drilling Industries , Nagothane Mumbai	Process control Engineer	Dec1996 to May 1997
Ferro Scrap Nigam Ltd , Bokaro	Engineer	June 1996 to Dec1996
Firth India Steel Co Ltd , Nagpur	Shift In charge (Steel Melting Shop)	Oct 1994 to June 1996

Hindustan Aeronautics Ltd , Aircraft Division Nasik.

- ☒ Working as Chief of Indigenisation associated with development of spares, materials, consumables and LRUs for fighter aircraft .
- ☒ Working as chief of laboratory and associated with testing and certification of aircraft materials and components.
- ☒ Setting up test procedures for quality audits.
- ☒ Failure investigation of aircraft components.
- ☒ Experience in material development /Import substitution and development of aircraft materials such as Ferrous materials, Non ferrous materials , Rubber compounds , composites through different international / National vendors etc .
- ☒ Testing and recommendations for Life extension of MiG-21/Mig-27 and MiG-29 aircrafts.
- ☒ Corrosion testing , Mechanical testing and failure analysis of aircraft structure/components.
- ☒ Finalizing the specifications for Testing of materials as per international standards GOST / ASTM /ISO.
- ☒ Associated with different internal and external audit like NABL ,ISO 9000D and ISO 14000

Jindal Drilling Industries, Raigad Mumbai

- ☒ Worked as Process control engineer in manufacturing of seamless pipes .
- ☒ Involved in the development of the stainless steel seamless pipes through piercing route .
- ☒ Involved in setting up of new process route such as heat treatment cycle, rolling temperature and mechanical properties as per customer requirements

Ferro Scrap Nigam Ltd , Bokaro steel plant , Bokaro

- ☒ Involved in raw material planning and its execution to meet the scrap requirement of Bokaro steel Plant, SAIL.
- ☒ Effectively handled and motivate the employees under me to achieve the production target.
- ☒ Received appreciation letter from MD SAIL for achieving the record production target.

Firth India Steel Company Ltd Nagpur

- ☒ Worked as shift In charge Steel Melting shop Electric Arc Furnace /LRF/ESR for development and manufacture of high quality steels for Space , aerospace and defense application.
- ☒ Involved in development and processing of valve steel 214N , High speed steel and Die steel .
- ☒ Involved in process control to bring down the % rejection , cost and increase profitability.
- ☒ Involved in quality improvement of steel to meet international specifications.

5.0 M.Tech Project Details

Title : Development and corrosion studies of “Aluminum /Fly ash and epoxy glass fiber reinforced composite materials for aeronautical application”

- Aluminum alloy grade LM6 reinforced with fly ash composite were fabricated by stir casting route and it is evaluated for its improved mechanical , corrosion , wear and erosion properties.
- Epoxy glass fiber reinforced composite were fabricated by vacuum bagging technique and its deterioration in mechanical , fracture , interlaminar shear and impact properties was evaluated in 3.5%NaCl and water .

6.0 PhD Details

Processing , fracture and corrosion studies of nano cenosphere reinforced epoxy / glass fiber and carbon fiber composite materials for aerospace application”

- Nano chemosphere reinforced Epoxy glass fiber and carbon fiber were fabricated by vacuum bagging technique and its environmental influence on mechanical , fracture ,interlaminar shear and impact properties was evaluated in different media.

7.0 Membership of Professional bodies :

- ❖ Indian Institute of Metals, Pune chapter (IIM)
- ❖ Aeronautical society of India
- ❖ Indian Society of Nondestructive Testing
- ❖ Society of failure Analysis (SFA, Mumbai Chapter)

8.0 Other Education Activities

1. Working as Secretary in Society of failure Analysis (SFA, Mumbai Chapter)
2. Working as member is CHMES ,Bhonsala Nasik Division
3. Working as mentor of Units
 - ❖ Bhonsala Military College, Nashik
 - ❖ Dr.Moonje Institute of Management, Nashik
 - ❖ Bhonsala Career Academy, Nashik
 - ❖ Bhonsala Information Technology,Nashik

9.0 List of publications:

1. [Wear behaviour of Equal channel Angular Pressed Aluminium AA2024 Fly Ash Metal Matrix Composites](#) ,Ajit Bhandakkar, Kulwant Singh, P K Limaye and Shankar M L Sastry ,International Journal of Trend in Research and Development 3 (ISSN: 2394 ...
2. [Fracture toughness of AA2024 aluminum fly ash metal matrix composites](#) ,A

Bhandakkar, RC Prasad, SM Sastry ,International Journal of Composite Materials 4 (2), 108-124

3. [Interlaminar fracture toughness of epoxy glass fiber fly ash laminate composite](#) ,A Bhandakkar, N Kumar, RC Prasad, SML Sastry ,Materials Sciences and Applications 2014
4. [Elastic plastic fracture toughness of aluminium alloy AA6061 fly ash composites](#) ,A Bhandakkar, RC Prasad, SML Sastry ,Adv. Mater. Lett 5 (9), 525-530
5. [Solution of emulsifiable oil and hydrogen peroxide for chemical–mechanical polishing of Ti alloy—A green approach](#) ,RM Kaushik, AB Bhandakkar, TU Patro ,Materials Letters 122, 252- 255
6. [Advanced Composites for Aerospace, Marine, and Land Applications](#) ,A Bhandakkar, R Prasad, SM Sastry, L Vázquez, E Hernández,Wiley: Wiley Online Library
7. [Deformation Behaviour of Aluminium Alloy AA6061– 10% Fly Ash Composites for Aerospace Application](#) ,A Bhandakkar, RC Prasad, SML Sastry ,Advanced Composites for Aerospace, Marine, and Land Applications 143, 1-21
8. [Corrosion and Wear Behaviour of Aluminum Alloy 6061– Fly Ash Composites](#) ,A Bhandakkar, B Balaji, RC Prasad, S Sastry ,Supplemental Proceedings: Materials Fabrication, Properties ...
9. [Processing Fracture Toughness and Damage Mechanics Studies of MMC for Aerospace](#)
A Bhandakkar, RC Prasad, SML Sastry ,Advanced Composites for Aerospace, Marine, and Land Applications 143 (1 ...
10. [Fracture Toughness Improvement of Y2O3 stabilized zirconia](#) ,Ajit Bhandakkar and SML sastry
,Material science and Technology
11. [Influence of Cenosphere reinforcement on Mechanical and Thermal Properties of Epoxy Cenosphere and Glass Fiber Laminate Composites](#) ,SMLS Ajit Bhandakkar, Chetan singh, R C Prasad ,Fourth International Conference on Recent Advances in Composite Materials ...
12. [Improvement in the mechanical properties and Fracture toughness by the addition of fly ash reinforcement in epoxy composite”](#) ,RCPSS Ajit Bhandakkar ,CORCON 2011, 28th Sept -3rd Oct 2011 Mumbai , India 1 (1)
13. [Development of Aluminium fly ash for critical application](#) ,SMLS Ajit Bhandakkar , R. C. Prasad ,MAGDEEP 2010, 1-3rd Oct 2011, Washington University in St.Louis, MO,USA 1 (1)

14. [Corrosion behaviour of aluminium alloy 2024-flyash composites](#) ,SMLS
Ajit Bhandakkar, B.Balaji, R. C. Prasad ,CORCON 2010, 23rd - 26th
September 2010 Goa, India 1 (1)
15. [Effect of Moisture on Tensile Strength and Interlaminar Fracture Toughness of Epoxy Glass Fiber Fly Ash Reinforced Composites](#) ,Ajit Bhandakkar, Niraj Kumar, B.Balaji, R. C. Prasad and Shankar Sastry ,CORCON 2010, 23rd - 26th
September 2010 Goa, India 1 (1)
16. Ajit Bhandakkar and R. C. Prasad*," Processing and Corrosion studies of
Aluminum fly ash composites" CORCON- 2009, 29th Sept -1st Oct 2009,Mumbai
17. Ajit Bhandakkar and R. C. Prasad*," Processing and environmental studies of epoxy
glass fiber laminate composites " CORCON- 2009, 29th Sept -1st Oct 2009,Mumbai
18. Ajit Bhandakkar*,Niraj Kumar*, B.Balaji*, R. C. Prasad* and Shankar Sastry. "Effect of
Moisture on Tensile Strength and Interlaminar Fracture Toughness of Epoxy-Glass
Fiber-Fly Ash Reinforced Composites", Accepted for presentation at CORCON -
2010,Sept 23-36,2010.
19. Ajit Bhandakkar*, B.Balaji*, R. C. Prasad* and Shankar Sastry ,"Corrosion and Wear
studies of Aluminium alloy AA6061 Fly ash composite" Accepted for presentation at
CORCON -2010,Sept 23-36, 2010.
20. Ajit Bhandakkar and R C Prasad," Development of high performance aluminum
composites using fly-ash reinforcement" Accepted for presentation ,Mageep
Symposium Oct 1-5 ,St Louis, Missouri .
21. Ajit Bhandakkar*, R. C. Prasad* and Shankar M L Sastry ,"Corrosion and Wear
studies of Aluminium alloy AA6061 Fly ash composite", Accepted for presentation ,
TMS -2011, Feb'27- March 3,2011, San Diego California.
22. Ajit Bhandakkar and S R Mukunde "Failure Analysis of heat treated aerospace
components"
,FHAC-2010, 14th June 2010, IIT Bombay .
23. Ajit Bhandakkar and R C Prasad , " Biomaterials and Mechanical Testing of
Implants " BMI- 2009, IIT Bombay
24. Devasis Mathur, Ajit Bhandakkar , and R C Prasad , " Fracture Toughness of the
Biomaterials " BMI-2009, IIT Bombay.
25. Ajit Bhandakkar , Kulwant singh and Vikram Neekhra , " Wear studies of
Aluminum Fly ash metal matrix composites "
26. Ajit Bhandakkar and R C Prasad," Development of Aluminum metal matrix and
polymer matrix composites ", NACE -2009 ,
27. Ajit Bhandakkar and Shirish Kale , " Development and characterization of Alloy

- steel grade 30KHGSA-SSH for aerospace application” NMD-2000,
28. Ajit Bhandkhar and D N Aher, “ Development of Rubber compound for aerospace application “
 29. Ajit Bhandkhar,D N Aher and MS Nadgir, “ Development of Metallic Materials for Aerospace Application “Institute of Engineers,2007
 30. Ajit Bhandkhar, “ Heat treatment and plating of aircraft components “ National Seminar on Indigenisation , HQMC , Nagpur,2006.
 31. Ajit Bhandkhar, “ Indigenous development of aircraft components “, National Seminar on Indigenisation , 3 BRD Kanpur,2006.

10 .List of patent and copy right granted

1. Adhesive SL-VKR-16 for airborne application , Patent NO 329244 Date 9 Oct 2014
2. Manufacturing process for blend of nitrile and chloroprene base rubber compound , 29th Nov 2019

11. List of patent Applied:

S.No	Name of patent	Application No and Date
1.	Rubber compound HA1824 for airborne application	2752/MUM/2014
2.	Universal Tensile and shear test fixtures for bolt	2753/MUM/2014
3.	Adhesive SL-6A for Airborne application	3202/MUM/2014
4.	Adhesive SL-VKT-2 for Airborne application	3203/MUM/2014
5.	Development of EDM marking ink for fuel resistance coating of metallic sheets	3201/MUM/2014
6.	Rubber compound HA 7610 for airborne application	2312/MUM/2015
7.	Adhesive SL-23CA for Airborne application	2313/MUM/2015
8.	Adhesive SL-4NBUV for Airborne application	2314/MUM/2015
9.	Natural Rubber compound	3733/MUM/2016
10.	Rubber compound Polychloroprene based HA2513 for Industrial application.	2019/2100/1605
11.	Rubber compound natural base HA 4712 for Industrial application	2019/2101/1949
12.	Development of Rubber Compound HA4802 for aircraft application	2017/2102/2938
13.	Development of self Adhesive electrical tape for aircraft application	2017/2102/6157

11. List of copy rights Applied:

1.	Procedure for Design, Development and Certification of airborne electrical and electronics items.	12858/2020/CO/L
2.	Procedure for Design, Development and Certification of airborne metallic materials.	12860/2020/CO/L

12. Awards Received:

- ❖ Best M.Tech Thesis award from NACE International Gateway India Section ,2008

13. Development of Import Substitute:

- ❖ 4500 Components / materials /Consumables developed for Military aircraft
- ❖ 8000 Components developed for Indian Airforce and Indian Navy

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