

RAM MADHAB BHATTACHARJEE

Research Interest: Underground coal mining technology, Risk assessment and Safety Management, Emergency Response & Disaster Management, Accident investigation, Mine fire and explosion

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BIO-DATA OF R M BHATTACHARJEE

Name	RAM MADHAB BHATTACHARJEE
Name of the Organization	INDIAN SCHOOL OF MINES, DHANBAD
Department	MINING ENGINEERING
Designation	PROFESSOR
Qualification	Ph.D. (ME), M.Tech. (IEM). B.Tech.(ME) First Class Mines Manager's Certificate of Competency (Coal)
Total Experience (Years)	32 years 7 months
Nature of Experience	
Academic & Research	
<u>In Academic Institution (Indian School of Mines, Dhanbad) :</u> (From 20.10.1997 to 28.02.2002 and 01.07.2013 to till date) 7 years 10 months After serving Indian coal mining industry for more than thirteen years, joined Indian School of Mines, Dhanbad, India as a faculty in the Department of Mining Engineering in the year 1997. <ul style="list-style-type: none">• Subjects taught at Undergraduate level: Method of mining (Coal & Metal), Advanced Method of mining (coal & metal), Innovative mining, Mine Surveying, Mine management, legislation and safety, Mine Development, Mine Design• Subjects taught at Postgraduate level: Advanced Method of mining (coal & metal), Mine management, legislation and safety, Mine Development• Supervised number of dissertation works for B.Tech. / M.Tech. students• Faculty In-charge Placement / Faculty In-charge Practical Training• Faculty In-charge Longwall Training Gallery• Faculty In-charge for Centre of Excellence of Safety, Occupational Health and Disaster Management• Co-Cordinator of Australia-India Centre for Clean Coal Technology and Energy Research: Co-Investigator in R&D Project on “Studies on Problems of Spontaneous Heating in Coal Pillars and Development of Techniques for its Prevention, Early Detection and Control”	
Industry / Professional / Consultancy Experience	
<u>In Coal Industry: 13 years and 4 months</u> <ul style="list-style-type: none">• Total experience of about thirteen years and four months in different capacities viz. Junior Executive Trainee (Mining), Jr. Mining Engineer / Mining Engineer / Ventilation Officer / Safety Officer / Sr. Mining Engineer / Longwall panel in charge / Project Manager / Supdt. Of Mines / Mines Manager• Worked as mines manager of one of the successful longwall mines of India• Worked for more than seven years in twelve longwall panels in different capacities like Longwall panel in charge, Safety Officer, Project Manager and Manager• Extracted developed pillars by longwall method under shallow depth of cover	

- Recipient of Republic Day Award for commendable performance for recovery of longwall face collapsed due to strata problem and saving huge loss of a longwall package
- **Received Special Certificates** on number of occasions from higher management in recognition of outstanding achievement in recovery of longwall face under severe ground control problem / saving the mine from drowning
- Experience of more than six years in conventional bord & pillar mines development / depillaring with caving / stowing

In Directorate General of Mines Safety, India:

(From 01.03.2002 to 30.04.2009) **7 years and 3 months**

Serving Indian School of Mines for more than four years as a faculty joined the Directorate General of Mines Safety, Inspectorate of Mines in India, the enforcement authority of Mines Act, 1952 and the rules & regulations framed there under in the mines of India. In this Directorate, served as Dy. Director of Mines Safety in the S&T Division and Career Maintenance & Coordination at Head Office and as an Inspector of Mines in the Nagpur Region No.1 of Western Zone.

Major functions as Dy. Director of Mines Safety:

- Supervision and **monitoring of safety aspects** of **Longwall face** operation with powered supports / shearer / road header and **Room & Pillar** mines using continuous miners & shuttle cars in India
- **Granting permission of longwall** workings with powered supports / **room & pillar** workings with continuous miner & shuttle cars / other special methods
- **Testing & Granting approval** of powered supports / hydraulic props / friction props / Mobile supports
- Carried out scientific investigation on environmental parameters like Air-borne dust survey, Noise & Illumination survey in **20** large opencast and mechanized underground mines
- Carried out scientific investigation on Blast induced ground vibration in coal and metal mines
- **Associated with development of guidelines** for indigenous **manufacture of powered supports** and its components (legs / valves)/ Indian Standards for testing of Powered supports / legs / valves / other roof supports
- Associated with **development of Indian test standards for power supports and its components**, other steel / mechanical props or cogs
- Associated **with testing of powered supports** and its components
- Conducted number of courses on Safety management / Risk Assessment in Indian mines
- Framed DGMS Circular for **conducting risk assessment** in Indian Mines

At Head Office in Career Maintenance & Coordination:

- Worked as Coordinator of Career Development Programme and other Training Programme of the Directorate (In-house and Foreign Training)
- Worked as a Dy. Director in coordination of different activities or issues with various ministries, committees, departments and authorities
- Coordination of Parliamentary Standing Committees on Labour / Safety in Coal Mines/ Steel and Mines, Parliamentary Consultative Committee of Ministry of Labour and Employment, Working Group on Occupational Safety and Health, Working Group on Coal and Lignite, etc.
- Dealing with Ministry of Labour & Employment, Ministry of Coal, Ministry of Mines, Ministry of Environment and Forest, Ministry of Petroleum, Govt. of India regarding
- ILO ratification, Status of different ILO Recommendations
- Standing Committee on Safety in Coal Mines, India
- Committee under Section 12 of Mines Act
- Key member of the team assigned with special jobs like Mines Act Amendment , Amendment of Coal Mines Regulation , Parliament Questions , Issues related to Safety and Health in mines , Preparation of the Report of the Working Group for Occupational Safety and Health in Mining Sector in India
- Working as the **Administrator in the US Department of Labour (USDOL) Project** on Coal Mines Safety and Health and closely associated with in **development of a software Indian Mine Safety Information System (IMSIS)**
- Worked as the **Coordinator of networking & computerization** in different offices of DGMS, India
- Key member in the Development of the Unique Software “**Indian Mine Safety and Information System (IMSIS)**” for DGMS, India
- **Coordinator for implementation of IMSIS in various offices of DGMS:**
 - Worked as **member of various committees** such as
 - Expert committee on Review of Recommendation of Paul Committee
 - Watch Dog Committee on Systematic Use of Powered supports
 - Implementation of MID Plan Scheme
 - Review Committee on Examination System
 - Represented DGMS, India in Expert Committee for Environmental Clearance of Coal Mines and Thermal Power Plants
 - Represented DGMS, India in the US-India Working Group on Coal & Lignite
 - Was a Member of the Review Committee for Central Board of Workers Education and Training, under Ministry of Labour and Employment, Govt. of India

At Nagpur Region No.1 as Inspector of Mines:

Inspection of coal and non-coal mines, Inquiry into accidents, Inquiry in to complaints related to

safety and health issues in mines, Safety Promotional activities like organizing safety week, safety meetings, Introduction of Safety Management System through Risk assessment, Granting of permissions to work under various conditions, Monitoring safety status of various mines

Department of Natural Resources and Mines (Department of Mines and Energy) ,

Queensland, Australia as Inspector of Mines: 4 years one month

Worked as Inspector of Mines since June 2009 to 30 June 2013.

- Conducted regular inspections and audit of underground and opencast mines of BHP Billiton Mitsubishi Alliance, BHP Billiton Mitsui Corporation, Peabody Energy, X-Strata, Rio Tinto, Anglo Coal, Theiss in Central Queensland, Australia
- Conducted regular inspections of underground coal mines of BHP Billiton Mitsubishi Alliance, Peabody Energy, X-Strata, Anglo Coal working **with powered supports longwall and also Continuous Miners & shuttle cars**
- Conducted Safe Guard Audit in mines
- Conducted investigation into incidents and accidents
- Worked as a Coordinator from the Department for issues on road design, construction, maintenance and watering of mine roads
- Conducted Subject audit of stone dust sampling and analysis in underground coal mines for preventing coal dust explosions
- Worked as Coordinator from the Department for ACARP project on explosion prevention technology
- Associated in Gas monitoring audit in underground coal mines
- Was a member of the team for developing Blast Fume Management Guideline

R&D and Consultancy:

- Principal investigator in Consultancy service for facilitating the process of conducting risk assessment and development of safety management plan of Parbatpur
- Principal investigator in Consultancy service for facilitating the process of conducting risk assessment and development of safety management plan of Neyvelli Lignite Corporaation mines
- Co-investigator in Consultancy Project of Improving Ventilation Efficiency in UCIL, India
- Co-investigator in Consultancy Project on Determination of Coal Quality for Thermal Plants in India
- Key Member of the team in World Bank Funded Project for Institutional Strengthening / Training of World Bank Project on Environmental Capacity Building in the Mineral Sector
- Leader of the CIL R&D Project on Study of fire and explosibility of Indian coal

(Prof. Ram Madhab Bhattacharjee)