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1. Name: **Dr. MORE RAMULU**

2. Date of Birth: 15/02/1971



3. Current Position and Address: Principal Scientist

CENTRAL INSTITUTE OF MINING & FUEL RESEARCH,  
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4. Educational qualifications: (Graduation and above)

Sl No.	Degree	Year	University / Institute	Subject
i	<b>S S C</b> (10 <sup>th</sup> )	1987	Board of Secondary Education, Hyderabad	General elementary subjects & Languages
ii	<b>Intermediate</b> (10 + 2)	1989	Board of intermediate Education, Hyderabad	Mathematics, Phy sics, Chemistry
iii	<b>B. E</b>	1995	Kothagudem School of Mines, Osmania University	Mining
iv	<b>M. Tech</b> (by research)	2004	Visveswaraya National Institute of Technology (NIT), Nagpur	Rock Blasting Engineering
v	<b>P.G.D.G.T</b>	2002	Nagpur University	Gandhian Thought
vi	<b>Ph.D</b>	2010	Indian Institute of Science (IISc), Bangalore	Geotechnical & Mining Engineering

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5. Work experience

SI No.	Designation	Institution/company	Form	To	Nature of work
i	Quick Hire Fellow	Central Mining Research Institute	1995	1996	Assisting to R&D projects
ii	Scientist B	Central Mining Research Institute	1996	2000	Mine Ventilation & Blasting engineering
iii	Scientist C	Central Mining Research Institute	2001	2004	Rock excavation and blasting engineering
iv	Scientist E-I	Central Mining Research Institute/ Central Institute of Mining and Fuel Research	2005	2008	Rock excavation and blasting engineering
v	Scientist E-II (Principal Scientist)	Central Institute of Mining and Fuel Research	2009	Till-date	Rock excavation and blasting engineering

6. Area of specialization:

Rock Excavation and Blasting Engineering with specialization in Tunneling, Controlled blasting, Blast Optimization & productivity improvement and rock mass damage assessment control for mines and tunnels

7. Honors/Awards received:

- i. **University Gold Medal** for first merit in Bachelors from Osmania University, A.P., India
- ii. **SCCL-MGMI Gold Medal for academic excellence in B.E.**
- iii. **ISRMTT best paper Award-2009** for Case History of Tunnelling and Foundations on Rock mass.
- iv. **Smt. Veena Roonwal Memorial national award 2009** from MEAI, Hyderabad for new technology development in blasting
- v. **SGAT Award of Excellence – 2010** from Society of Geoscientists and Allied Technologists, Bhubaneswar for development of Innovative blasting technology
- vi. **MEAI – S.R.G. Information Technology Award- 2011** for development and application of IT in mining engineering
- vii. **National Design Award in Mining Engineering - 2010** by National Design and Research Forum (NDRF) of IEI for design and development of Innovative Mining Technology
- viii. **National Geoscience Award in Mining Technology - 2010** from Ministry of Mines, Govt. of India for development of safe and productive Mining Technology
- ix. **JOHN DUNN MEDAL for 2011-2012** from MGMI, for the outstanding contributions to the Indian Mineral Industry
- x. **Prof. H.R. Anireddy Memorial Award** for 2013 from Indian Mining & Engineering Journal for the outstanding contributions to the Mining Technology

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8. Fellowships/Scholarships:

- i) Telugu Vignana Paritoshikam from Govt. of A.P. for top merit in SSC
- ii) Quick Hire Fellowship from CMRI during 1995

9. No. of Research Publications:

- Papers in journals: 30
- In conference proceedings: 60
- Invited/key-note addresses: 25
- List of best 05 publications:
  - i. Ramulu, M, Sitaram T.G., Choudhury P.B., Raina A.K., Chakraborty A.K.,2009, Effect of repeated blast vibration on Rock mass damage at a Penstock Tunnel of a hydroelectric power project – a case study, J. of Rock Mechanics and Tunnelling Tech. vol. 15, no.01, pp.17-36
  - ii. Ramulu, M., 2010, Development of a new blast vibration prediction model incorporating burden variations in surface blasting, Int. Journal of Geotechnical Earthquake Engineering, IGI publications, july-sept., Vol.1, No.2, pp. 72-88.
  - iii. Ramulu, M. and Sitharam, T.G, 2010. Blast induced damage due to repeated vibrations in jointed gneiss rock formation, Int. Journal of Geotechnical Earthquake Engineering, IGI publications, Vol.1, No.1, pp112-136.
  - iv. Ramulu, M., Chakraborty A. K. and Sitharam T.G., 2009. Damage assessment of basaltic rock mass due to repeated blasting in a railway tunnelling project – a case study, Tunnelling and Underground Space Technology, Vol.24, pp. 208–221
  - v. Ramulu M and A.Sinha, 2010, Improvement of productivity & safety in opencast blasting using bottom hole air decking technique, Visfotak – explosive safety & technology society journal, September, vol. no. 5, pp.35-

10. Number of Books authored/edited:

11. (a) No. of Patents granted/applied for:

(b) Technologies developed, Licensed and/or commercialized:

12. Foreign visits:

<b>S.No</b>	<b>From</b>	<b>To</b>	<b>Country visited</b>	<b>Purpose</b>
1	10.06.1999	20.06.1999	U.K.	For attending a training course on the operation of MDL's Quarryman ALS and Bore Trak system to produce face profiles and hole deviations with the Face 3D software
2	21.06.1999	30.06.1999	Canada	For attending a training course on the WipFrag – a photoanalysis system for fragmentation

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				measurement for blast optimisation
3	12.09.2009	20.09.2009	Spain	For attending an International conference on Fragmentation by Blasting –FRAGBLAST'8
4	14.09.2013	18.09.2013	Russia	For attending an International Conference '7th World Conference on Explosives & Blasting' held in Moscow and to present a technical paper

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#### 13. Details of Professional memberships:

- i. **Fellow** (F-115893-3) of Institution of Engineers (India)
- ii. **Member** of International Society of Rock Mechanics (ISRM), PORTUGAL
- iii. **Life member** (LM-3438) of Mining Engineers Association of India (MEAI)
- iv. **Life Member** (7576-LM) of Mining Geological & Metallurgical Institution (MGMI), Kolkata
- v. **Life member** of Society of Geoscientists and Allied Technologists, Bhubaneswar

#### 14 . Major contributions: ( Max. 150 words)

- I. Controlled blast design to ensure safety and to increase productivity of opencast blasting
- II. Optimisation of blast fragmentation to improve productivity of unit mining operations
- III. Safe blast design to control the environmental parameters & Blast vibration, air overpressure and flyrock monitoring and mitigation
- IV. Controlled blast design to restrict rockmass damage and overbreak in underground excavations
- V. State of art blasting and support design for Tunneling and Cavern excavations and underground space technology
- VI. Design and execution of smooth blasting for any type of rock mass to get smooth profiles tunnels with maximum half cast factors.
- VII. Rippability analysis and rockmass characterization by seismic profiling
- VIII. Shaft sinking by swift and economic methods of longhole raise driving techniques
- IX. Demolition, implosion & controlled concrete blasting
- X. Safety and productivity enhancement of underground and opencast rock excavations
- XI. Innovative bottom hole decking and in-hole delay cut blast design for better productivity in underground rock excavations
- XII. Controlled blasting techniques for Urban blasting and Metro Rail applications

#### 15. Technologies and Products/ Services

- (i) Developed:
  - a) In-hole delay cut blast design for better productivity in underground rock excavations
  - b) Bore-trap a rescue device for borehole trapped children

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- (ii) Licensed:
- (iii) Commercialized:

16. Designs and Prototype Developed:

17. Honours and awards won for technological contributions or sociological impact of R&D:

- i) Guest editor for a special issue of **International Journal of Geotechnical Earthquake Engineering** on 'Dynamics and Blasting', **IGI Global publications**, An official publication of the Information Resources Management Association, **July-December 2010, Vol. 1, No. 2.**
- ii) Editorial board member of International **Journal of Geotechnical Earthquake Engineering, IGI Global publications**, An official publication of the Information Resources Management Association
- iii) Editorial board member of **Journal of explosives safety and technology society 'Visfotak', India.**
- iv) Editorial board member of **Journal of explosives safety and technology society 'Visfotak', India.**
- v) Editorial board member of **Indian Mining & Engineering Journal, Bhubaneswar, India.**
- vi) Editorial board member of **Journal of the Society of Geoscientists & Allied Technologists, Bhubaneswar, India.**



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