



### **Brief Bio-data of Dr. Pradeep K Singh**

Dr. Pradeep Kumar Singh is Director, CSIR-Central Institute of Mining and Fuel Research (CSIR-CIMFR), Dhanbad, a constituent Institute of Council of Scientific & Industrial Research, under the aegis of Ministry of Science & Technology, Government of India.

Dr. Singh has studied from Pre-University to Post Graduate level at Banaras Hindu University, Varanasi, India, and did his Doctor of Engineering Degree from the Technical University, Clausthal, Germany. He has also worked at Lossande Institute of Geosciences, University of Toronto, Canada, as Post Doctoral Fellow. He joined this Institute in 1990 as Scientist 'B' and by virtue of his hard work and dedication, rose to the present coveted post of Director.

Dr. Singh has made notable contributions in Explosive Science and Blasting Technologies to solve practical problems in the mining industry encompassing the fields of optimal use of explosive energy in rock fragmentation, explosive energy partitioning, blast vibration, wall-control, fragmentation control, blast design in mines and tunnels, pre-split blast design, cast blast designs in coal mining operations besides correlating structural damages caused due to blast vibrations.

He has authored a blast damage index for underground openings in close vicinity of open-cast blasting operations for Indian coal mines. Based on this study, the Mine Regulatory Authority in India (Directorate General of Mines Safety) has issued a mandatory guideline (circular No. 06; dated 28.05.2007) on "Damage of below ground structures due to blast induced vibration in nearby opencast mines" for implementation in mines. He has also authored 4 more guidelines, which have been internationally accepted.

Presently, Dr Singh is coordinating many research activities of the institute in field of fuel and energy science. He is the National Coordinator of a Pan India project for evaluation and monitoring of quality of Indian coal being supplied by mines in different thermal power plants of the country. This rigorous exercise has helped in planning of production of good quality coal and its judicious utilization at power plants, which has resulted in reduction of cost of generation of power, making electricity more affordable. Under his guidance an important project on conversion of coal to liquid fuel was completed. In this project, one cobalt catalyst for conversion was developed and tested in an integrated Coal to Liquid Pilot Plant commissioned in the Institute. His concerted efforts have led to the development and distribution of Certified Reference Material (CRM) to industries and laboratories for quality assurance and calibration of chemical analyses of bituminous coal. He is now guiding a team of scientists working on Oxy Fuel Combustion of Pulverised Coal, Co – Combustion of Coal and Biomass in FBC and Mercury emissions monitoring from point sources in coal fired plants. He has also initiated research study for development of indigenous technology for production of Methanol from coal.

Based on scientific studies sponsored by different organizations, Dr. Singh has written 311 technical reports and 9 S&T reports funded by Ministry of Coal, Government of India. He has 151 papers published in referred National and International Journals/Symposia to his credit. He is also author of 4 books and 4 booklets.

Dr. Singh is recipient of prestigious National Mineral Award, Raman Research Award and CSIR Technology Award for Business Development and Technology Marketing – 2017. He is a Fellow of German Academy.

Dr. Singh is Chairman of International Committee on Rock Fragmentation by Blasting, Headquartered in Spain, Chairman of BIS Committee on Solid Mineral Fuels Sectional Committee (PCDC-7), Chairman of the Committee for Quality Coal for Power Generation, Member of SSRC, Ministry of Coal, Member of Governing body of NIRM; Member of Research Advisory Council, NTPC-NETRA, Noida, Member of Committee on Central Government Programming Board, GSI. He is also representing India in the International Committee on World Forum of University on Resources and Sustainability, Headquartered in Germany.

Dr. Singh was deputed for scientific pursuits to Australia, Austria, Canada, Chile, China, France, Germany, Japan, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Tanzania and USA.