

## Brief Bio-Data

1. Name : Dr. J. C. Jhanwar
2. Date of Birth : 12 February, 1965
3. Current Position & Address: Chief Scientist, CSIR-CIMFR Nagpur Research Centre;  
Email: jcjhanwar@cimfr.nic.in; Contact No.: 9423401363
4. Educational Qualifications :

Sl. No.	Degree	Year of Passing	University/Institute	Subject
1	Bachelor of Engineering	1987	University of Jodhpur	Mining Engineering
2	Higher Level Diploma	1990	Birla Institute of Technology & Science, Pilani	Science & Technology
3	Master of Engineering	2000	Nagpur University	Mining Engineering
4	Doctor of Philosophy	2010	Visvesvaraya National Institute of Technology, Nagpur	Mining Engineering

### 5. Work experience:

Designation	Institute/company	From	To	Nature of Work
Scientist B	Central Mining Research Station, India	29.08.1989	28.08.1994	R & D in the fields of Mine Fire & Slope Stability.
Scientist C	Central Mining Research Institute, India	29.08.1994	28.08.1999	R & D in the fields of Slope Stability & Blasting.
Scientist E I	Central Institute of Mining & Fuel Research	29.08.1999	28.08.2004	R & D in the fields of Slope Stability & Rock Mechanics
Principal Scientist	CSIR-Central Institute of Mining & Fuel Research	29.08.2004	28.08.2009	R & D in the fields of Slope Stability & Rock Mechanics in Mines.
Sr. Principal Scientist	CSIR-Central Institute of Mining & Fuel Research	29.08.2009	28.08.2014	R & D in the fields of Slope Stability & Rock Mechanics in Mines.
Chief Scientist	CSIR-Central Institute of Mining & Fuel Research	29.08.214	Continued	R & D in the fields of Slope Stability & Rock Mechanics in Mines.

### 6. Work Area(s)/ Specialization: Open Pit Geotechnics/Slope Stability in Opencast Mines.

### 7. Major Contributions:

Formulated Optimum Designs of Pit Slopes & Waste Dumps through extensive Scientific Studies at Opencast Mines operating under Diverse and Complex Geo-Mining conditions covering Coal, Limestone, Lead-Zinc, Rock Phosphate, Baryte, Wollastonite, Marble & Iron ore mines situated in different parts of India. The implementation of these Designs & other related Recommendations facilitate Optimum Mineral Extraction from mines with Safety of Pit Slopes and Waste Dumps. Developed Pit Slope Design Curves and an Empirical Classification System for Slope Stability Assessment of Opencast Coal Mines in Wardha Valley Coalfield. Developed a Feasibility Index, Guidelines on Air-Deck Length and Correlations for Blast Performance Parameters for Air-Deck Blasting for different rock mass conditions in Opencast Mines through scientific studies in Coal and Manganese Opencast Mines.

8. No. of Research Publications:

- Papers in Journals : 25
- In conference proceedings: 77
- Invited lectures delivered : 18
- List of best 05 publications:
  - I. A Classification system for the slope stability assessment of opencast coal mines in central India. Rock Mechanics and Rock Engineering, Vol. 45, Issue 4, pp. 631-637, 2012, DOI: 10.1007/s00603-012-02234.
  - II. Theory and practice of air - deck blasting in mines and surface excavations - A review. Geotechnical and Geological Engineering, Vol. 29, No. 5, pp. 651-663, 2011, DOI: 10.1007/s10706-011-9425-x.
  - iii. Slope failures in the opencast coal mines of Wardha Valley Coalfield in central India - A study. Rock Mechanics and Rock Engineering, Vol.44, Issue 5, pp. 635-640, 2011, DOI: 10.1007/s00603-011-0139-4.
  - iv. The use of air-decks in production blasting in an open - pit coal mine, Geotechnical and geological Engineering. 18:269-287, 2001.
  - v. Influence of air-deck blasting on fragmentation in jointed rocks in an open-pit manganese mine. Engineering Geology, 57: 13-29, 2000.
- Books/Chapters authored/edited:

Proceedings of the National Seminar on “Eco-Friendly Mining - A Task for 21<sup>st</sup> Century”, Nagpur, 8-9 January, 2000, MGMI - Nagpur Chapter (Co Editor).

9. List of 5 Major Contract R&D Projects:

- (i) Investigation into air-deck blasting and its influence on blast performance at Dongri-Buzurg Opencast Manganese Mine (Sponsored by: MOIL).
- (ii) Geotechnical study for the advice on slope stability of the Nimbeti limestone mine, (Sponsored by: Shree Cement Ltd.).
- (iii) Geotechnical studies for the advice on ultimate pit slope designs of the Morwad & Dharmeta marble mines (Sponsored by: R K marble Pvt. Ltd.). .
- (iv) Geotechnical studies for the advice on slope stability of overburden benches and overburden dumps at Mangampeth Baryte Project, (Sponsored by: APMDC Ltd.)
- (v) Geotechnical investigation for discretization of pit slopes at Rampura-Agucha opencast mine (Sponsored by: HZL).

10. (a) Name of Patents/Copyrights applied /granted/commercialized:

- FRAGALYST (An Image Analysis Based Fragmentation Assessment Software)  
(As Team Member)

(b) Technologies/Products /knowhow/Services developed :

- Technology for Extraction Design of Locked up Coal by High wall Mining in India (As Team Member)
- A Classification System for the Slope Stability Assessment of Opencast Coal Mines in Central India. (As Principal Investigator).

11. Honors/Awards/Recognitions/Fellowships/Scholarships/Professional Memberships:

Award: CSIR Technology Award - 2011 for “Physical Sciences including Engineering” for ‘Developing Technology for Extraction Design of Locked up Coal by Highwall Mining in India’ (Key Team Member).

Fellow : The Institution of Engineers (India)  
Life Member : Mining Engineers Association of India