

PROF. FRANK ROXBOROUGH

EMERITUS PROFESSOR OF MINING ENGINEERING



- QUALIFICATIONS** B.Sc in Mining Engineering, University of Durham, 1958
Ph.D in Mining Engineering, University of Durham, 1961
- EMPLOYMENT** 1951 - 54 National Coal Board (U.K.). Mineworker.
1961 - 63 Overman.
1963 - 70 University of Newcastle upon Tyne (U.K.). Lecturer.
1970 - 75 Reader.
1975 - 97 UNSW, School of Mining Engineering. Professor.
1975 - 88 Head of School.
1989 - 92 Head of School.
1997 - Emeritus Professor.
- VISITING APPOINTMENTS** 1978 University of Newcastle upon Tyne
1979 University of California, Berkeley
1979 New Mexico Institute of Mining & Technology
1983 University of Witwaterstrand
1983 Curtin University of Technology
- PROFESSIONAL SOCIETIES** Certificated Colliery Manager
Institution of Engineers, Australia, Fellow
Australasian Institute of Mining & Metallurgy, Fellow
Institution of Mining Engineers (London), Fellow
Institution of Mining & Metallurgy (London), Fellow
Chartered Engineer
Chartered Professional Engineer
- TEACHING AREAS** Machine Mining and Tunnelling
Excavation Engineering
Mining Systems and Operations
- RESEARCH INTERESTS** **Rock Cutting Mechanics**
Fundamental studies on breakage of rock by drag bits, free rolling cutters and impactors.
Machine Mining & Tunnelling
The design of, and application of mechanics to mining and tunnelling systems.
Design of cutting arrays for mining machines, road headers, tunnel borers and raise borers.
Airborne dust generation from machines and its suppression.
Correlation of rock properties with machine potential and performance.
Coal Face Mechanisation
Longwall mining systems
Continuous miner systems.
- SELECTED PUBLICATIONS** O'Reilly, M P, Tough, S C, Pirrie, N D, Hignett, H J and Roxborough, F F, 1979. Tunnelling trials in chalk, in *Proceedings. Institute Civil Engrs.* (London) Pt.2, June, pp 255-283.
Roxborough, F F and Pedroncelli, E J, 1982. A practical evaluation of some coal cutting theories using a continuous miner, in *The Mining Engineer*, 252:145-156.
Roxborough, F F, 1987. An assessment of the potential for continuous miner runaway when floor brushing, in *The Coal Journal*,18:47-53.
Roxborough, F F, 1988. Multiple pass sub-interactive cutting with picks and discs, in *Conf. on Applied Rock Engineering, CARE '88, IMM, Newcastle upon Tyne*, pp 183-191.
Lin, B, Roxborough, F F and Hagan, P C, 1990. Massive Breakage of Rock by High Pressure Water Jets, in *Proc 10th Int. Sym. on Jet Cutting Tech*, pp 399-414 (Elsevier: London).
Hood, M C and Roxborough, F F, 1992. Rock Breakage – Mechanical in *SME Mining Engineering Handbook*,(1):9.1 pp680-721 (AIME: New York).
- PROFESSIONAL INTERESTS AND CONSULTING** Member, NSW Coal Compensation Review Tribunal
Member of Council, Institution of Mining Engineers