

Calvin J. Konya Ph.D.

DEGREES AND CREDENTIALS

- Distinguished Scientist 1995 (Hungary).** Inducted as life member into National Academy of Science for contributions and innovative research in Explosives Engineering
- Doctorate 1989 (Honorary)** From Nehezipari Muszaki University (Hungary) for outstanding worldwide contributions in Explosives Engineering.
- Ph.D., 1972** Mining Engineering, University of Missouri at Rolla. Emphasis on permeability of coal, explosives application, shaped charge design, fracture propagation, rock mechanics and geology.
- MS, 1970** Engineering Management, University of Missouri at Rolla. Emphasis on finance, marketing, personnel relations, computer applications.
- MS, 1968** Mining Engineering, University of Missouri at Rolla. Emphasis on explosives application in mining and construction, rock mechanics and geology.
- BS, 1966** Mining Engineering, Missouri School of Mines, University of Missouri at Rolla. Emphasis on rock mechanics and blasting.

LICENSES

Blasters License - State of Pennsylvania
Blasters License - State of Illinois
Private Pilot's License

INDUSTRIAL EXPERIENCE

1973-Present President, Precision Blasting Services, Inc.; Division of Intercontinental Development Corporation. Offices, United States and Europe.

Blast Design Consulting Services

Designed blasts and solved blasting and blast vibration problems for companies in United States, Canada, Australia, South America, Africa and Europe, including Halco Mining, Vulcan Materials, Waste Management of Ohio, TIC Consulting, Woodville, Lime and Chemical, Blount Brothers, Eszak Magyar Orsag Kobanya Vallallat, Mt. Isa Mines, Geupel Construction, Green Construction, Austin Powder, Hercules, Inc., DuPont, Canadian Forces (Military), U.S. Army Corps of Engineers,

and numerous others.(see representative clients list attached for more details)

Blasting consultant for Department of Natural Resources for State of Ohio - Coal Mine Blasting. (1980 - Present.), Alaska DOT, USAC, FHWA.

Research

Industrial and government-funded research in mining blasting and vibration control. Government Research Projects completed - 20 million dollars.

Seminars and Training Programs

Designed and instructed Blaster Training Program for Illinois Laborers Union (ongoing). Designed and instructed Training Program in Blasting for MESA, FHWA, U. S. Army Corps of Engineers, Panama Canal Commission, Bureau of Reclamation, and other government agencies. Designed and instructed over 800 seminars on explosives and blasting for the mining and construction industry in USA, Canada, Mexico, Panama, Peru, South Africa, Romania and Hungary

Explosives - Formulations Research

Research with nine different explosives companies to perfect explosives formulations in U.S.A., Canada and Europe. Developed an entire family of both cap sensitive and non-cap sensitive emulsion explosives currently sold in five countries.

Legal

Served as consultant and expert witness in legal cases in U.S.A. and Canada.

Management of Explosives Companies

President of Precision Blasting Services, CEO of Precision Explo in Romania, President of Energia (Base Emulsion Matrix Manufacturer and explosive distributor) in Hungary.

1966-1973 Mining Engineering and Blasting Consultant.

ACADEMIC EXPERIENCE

1987-Present Adjunct Professor, John Carroll University. Adjunct Professor, Industrial and Systems Engineering, Ohio University. Professor Nehezipari Moszaki University - Hungary.

1985-87 Professor of Mining Engineering, Ohio State University. Taught courses in Rock Mechanics and Blast Design and Vibration Control. Research in Blast Design and Vibration Control.

1980-85 Professor, Chairman of Mining Engineering, and Director of the Ohio Mining and Mineral Resources Research Institute. Taught courses in

Rock Mechanics , Blast Design and Vibration Control. Research in Blast Design and Vibration Control.

- 1978-80 Associate Professor, Director of the Ohio Mining and Mineral Resources Research Institute, and Mining Engineering Program Coordinator at the Ohio State University. Taught courses in Rock Mechanics and Blast Design and Vibration Control. Research in Blast Design and Vibration Control.
- 1975-78 Associate Professor of Mining Engineering, College of Mineral and Energy Resources, West Virginia University. Taught courses in Blast Design and Vibration Control. Research in Blast Design and Vibration Control.
- 1975 Exchange Scientist with US National Academy of Sciences for 6 months in Eastern Europe. Studied blasting and mining methods in Hungary and Poland. Worked with Mining Research Institute and Mining Department at University in Miskolc, Hungary.
- 1971-75 Assistant Professor Mining Engineering, School of Mines, West Virginia University. Taught courses in Rock Mechanics and Blast Design and Vibration Control. Research in Blast Design and Vibration Control.
- 1970-71 Senior Research Assistant, Rock Mechanics and Explosive Research Center, University of Missouri at Rolla.
- 1966-70 Teaching Assistant in Mining Engineering, University of Missouri at Rolla.

REPRESENTATIVE GOVERNMENT CONTRACTS RESEARCH AND CONSULTING

- 2004-2005 25. Blasting Consultant, US Army Corp. of Engineers, Town of Martin Virginia Redevelopment Project.
- 2002-2003 24. Blasting Consultant, US Army Corp. of Engineers, Grundy Virginia Redevelopment Project.
- 2001-Present 23. Blasting Consultant, US army Corp. of Engineers, Folsom Dam renovation, task order DCS003391.
- 2002 22. Blasting Consultant, Alaska DOT, Agreement No. 36893005, amendment Patrick Kemp, Contracting Officer
- 2001 21. Blasting Consultant, Alaska DOT, Agreement No. 36893005, amendment Patrick Kemp, Contracting Officer
- 2001 20. Blasting Consultant, US Army Corp. of Engineers, Port Everglades Deepening project.
- 2001 19. Blasting Consultant, US army Corp. of Engineers, Folsom Dam Renovation .

- 2000 18. Blasting Consultant, Alaska DOT, Agreement No. 36893005, amendment Patrick Kemp, Contracting Officer
- 1998 17. Blasting Consultant, Alaska DOT, Agreement No. 36893005, Patrick Kemp, Contracting Officer
- 1998 16. "Preparation of Blasting Manual for US Army Corps of Engineers, COE Contract No. DACW43-98-D-0508, Gary Hemen, St Louis District
- 1998 15. "Rock Blasting Course," FHWA contracts principal investigator. FHWA Contract No. DTFH61-98-P-00430. Stephanie Parker, Contracting officer
- 1996 14. "Rock Blasting Course Riyadh," FHWA contracts principal investigator. FHWA Contract No. DTFH61-96-00319. Antonio Neves Torres, Contracting officer
- 1996 13. "Rock Blasting Course Riyadh," FHWA contracts principal investigator. FHWA Contract No. DTFH61-96-P-00464. Gilbert Trainer, Contracting officer
- 1993 12. "Rock Blasting Course Riyadh, Saudi Arabia," FHWA contracts principal investigator. FHWA Contract No. DTFH61-93-P-00464. Gilbert Trainer, Contracting officer
- 1990-95 11. "Rock Blasting Course," FHWA contract principal investigator. FHWA Contract No. DTFH61-90-C-0058.
- 1986-90 10. "Rock Blasting Course," FHWA contract principal investigator. FHWA Contract No. DTFH 61-86-C-00033.
- 1983-87 9. "Rock Blasting Course," FHWA contract principal investigator. FHWA Contract No. DTFH 61-86-C-00110.
- 1980-81 8. "Blasthole Depth and Stemming Height Measuring Systems," USBM Contract J0208022, Principal Investigator.
7. "Automated Blasthole Logging And Design," OSM Grant No. G 5115006, Consultant.
6. "Automated Blasthole Logging and Design," OCRLA-10, Consultant.
- 1979-81 5. "Mined Land Reclamation by Biological Reactivation," OSM Grant No. G 5195037, Principal Investigator.
4. "Control of Air Blasts and Excessive Ground Vibrations from Blasting by Use of Efficient Stemming," OSM Grant No. G 5195034, Principle Investigator.
- 1977-78 3. "In-situ Coal Liquefaction," USBM Contract No. J0265039, Co-principal Investigator.

1977-1980 Chairman, Board of Directors, Society of Explosives Engineers.

1979-1988 Member, Executive Committee, Central Ohio Section of AIME.

OTHER PERTINENT INFORMATION

Professional: Founder, first President and Executive Director of the Society of Explosives Engineers. Blasting Committee; Underground Construction Research Council of AIME-ASCE. Society of Mining Engineers, AIME.

PUBLICATIONS

Technical Papers:

1. Konya, C. J., "Spacing of Explosive Charges," MS Thesis, Department of Mining and Petroleum Engineering, University of Missouri at Rolla, 1968.
2. Ash, R. L., Konya, C. J., and Rollins, R. R., "Enhancement Effects from Simultaneously Fired Explosive Charges," "Transactions, Society of Mining Engineers of AIME, Vol. 244, No. 4, December 1969.
3. Clark, G. B., Rollins, R. R., and Konya, C. J., "Use Of Shaped Charges for Increasing the Permeability of Coal," Proceedings of Conference on the Underground Mining Environment, University of Missouri at Rolla, October 1971.
4. Konya, C. J., "The Use of Shaped Explosive Charges to Investigate Permeability, Penetration, and Fracture Formation in Coal, Dolomite, and Plexiglas," Ph.D. Dissertation, Department of Mining and Petroleum Engineering, University of Missouri at Rolla, 1972.
5. Konya, C. J., and Rieke, H. H., "Dynamic Fracturing Phenomena in Model Materials Resulting from Shaped Charge Jet Penetration," Proceedings of Drilling and Rock Mechanics Conference, Society of Petroleum Engineers of AIME, Austin, January, 1973.
6. Konya, C. J., "The Effects of Joints and Bedding Planes on Rock Blasting," Proceedings of the Second Conference on Drilling and Blasting, International Society of Explosives Specialists, Phoenix, February 1973.
7. Skidmore, D. R., and Konya, C. J., "Liquefaction Study of Several Coals and a Concept for Underground Liquefaction," Preprint, Coal Gasification Symposium (Chemical Abstracts, Vol. 82, No. 75337 E, 1973), American Chemical Society, Division of Fuel Chemistry, Dallas, April 1973.
8. Konya, C. J., "High Speed Photographic Analysis of the Mechanics of Presplit Blasting." Proceedings of Sprengtechnik International, (in German), Linz, Austria, 1973.
9. Konya, C. J., "The Mechanics of Rock Breakage Around a Confined Air-Gapped Explosive Charge," Proceedings of the Industrial Blasting Section of the Scientific Society for Building, Budapest, Hungary, January 1974.

10. Skidmore, D. R., and Konya, C. J., "Ammonium Nitrate: Projections on its Future Availability," Proceedings of the First Conference on Explosives and Blasting Technique, Atlanta, 1974.
11. Skidmore, D. R., and Konya, C. J., "Chemical Communion of Coal," Preprint, Annual Meeting, AIME, Dallas 1974.
12. Konya, C. J., "International Blasting Conference -- Linz." Emphasis on Blasting, Vol. 10, No. 1, 1974.
13. Konya, C. J., "Priming and Boosting Practices," Proceedings of Explosives and Blasting Conference, Lexington, 1974.
14. Rieke, H. H., and Konya, C. J., "Influence of Rock Properties on CO Laser Beam Penetration in Some Sedimentary Rocks," GSA, 1974.
15. Konya, C. J., "Initiierung Von Groben Tiefboltrlochladungen," Information on Stag for Sprengtechnik 1974 International, WIFI, Linz, Austria, December 1974.
16. Ash, R. L., and Konya, C. J., "Flexible Sprengungeineneve Theorie Uber Felssprengung," Informationstag for Sprengtechnik 1975 International, WIFI, Linz, Austria, December 1975.
17. Konya, C. J., And Foldesi, J., "As Inicialasi Pontok Szamanak Meghatarozasa Ando -- Toltott Robbantolyukak Esten," Epitoanyag, Budapest, Hungary, December 1975.
18. Konya, C. J., and Foldesi, J., "Priming Techniques Employed at the Tallya Quarry," Proceedings of the Second Conference of Explosives and Blasting Technique, Louisville, February 1976.
19. Konya, C. J., "Proper Blasting Planning and Techniques," Constructor Magazine, March 1976.
20. Konya, C. J., and Foldesi, J., "A Banyafal Also Reszenek Jovesztesi Problkemai Nyagatmeriju Nyujtott Toltetek Robbantasakor," Banyaszat, Budapest, Hungary, November 1976.
21. Konya, C. J., and Foldesi, J., "Kobanyaszati Robbantasok Tervezese Nyagatmeriju Nuyjtott Toltetekkel," Epitoanyag, Budapest, Hungary, January 1977.
22. Konya, C. J., "Blasting Procedures at Woodville Lime and Chemical Company," Proceedings of the Third Conference of Explosives and Blasting Technique, Pittsburgh, February 1977.
23. Konya, C. J., "How to Cope with Blasting Problems in Strip Mining," Coal Mining and Processing, September 1977.
24. Konya, C. J., "Good Blasting Practices Mean Money in the Bank," Rock Products, November 1977.
25. Konya, C. J., and Davis, G. J., "The Effects of Stemming Consist on Retention in Blastholes," Proceedings of the Fourth Conference on Explosives and Blasting Techniques, Society of Explosives Engineers, February 1978.
26. Ash, R. L., and Konya, C. J., "Spacing: The Most Important Problems in Blasting," Proceedings of Fifth Conference on Explosives and Blasting Technique, February 1979.

27. Konya, C. J., "Directional Effects of Small Diameter Primers," Proceeding of Sixth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Tampa, 1980.
28. Konya, C. J., "Presplit Blasting: Theory and Practice," Preprint, AIME, Las Vegas, 1980.
29. Konya, C. J., Otuonye, F. O., and Skidmore, D. R., "Airblast Reduction from Effective Blasthole Stemming," p. 145-156, Proceedings of the Eighth Annual Conference on Explosives and Blasting Technique, Society of Explosives Engineers, New Orleans, Louisiana, January 1982.
30. Gozon, J., Konya, C. J., Lukovic, S., Ludquist, R. G., and Olah, J., "Mined Land Reclamation by Biological Reactivations," Proceedings, Symposium of Surface Mining, Hydrology, Sedimentology and Reclamation, Lexington, KY, 1982.
31. Otuonye, F. O., Konya, C. J., and Skidmore, D. R., "Effects of Stemming Size Distribution on Explosive Charge Confinement: A Laboratory Study," Paper number 83-181, SME of AIME Annual Meeting, Dallas, Feb. 14-18, 1983.
32. Otuonye, F. O., Skidmore, D. R., and Konya, C. J., "Measurements and Predictions of Borehole Pressure Variations in Model Blasting Systems," Proceedings of the First International Symposium on Rock Fragmentation by Blasting, Lulea, Sweden, August 22-25, 1983.
33. Otuoyne, F. O., Konya, C. J., and Skidmore, D. R., "Effects of Stemming Size Distribution on Explosive Charge Confinement: A Laboratory Study," Transactions of the Society of Mining Engineers of AIME, 1983 and Mining Engineering, 1983.
34. Lundquist, R. G., and Konya, C. J., "A Comparison of Efficiency of Mechanical and Explosive Communitation," Proceedings of 24th U.S. National Symposium on Rock Mechanics, Texas A & M University, 1983.
35. Britton, R. R., Konya, C. J., and Skidmore, D. R., "Primary Mechanics for Breaking Rock with Explosive," Proceedings of 25th Symposium on Rock Mechanics, New York, 1984.
36. Konya, C. J., Britton, R. R., and Lukovic, S., "Removing Some of the Mystery from Presplit Blasting," The Journal of Explosives Engineering, Vol. 2, Number 1, Montville, 1984.
37. Konya, C. J., and Britton, R. R., "Explosive Selection -- A New Approach," Proceedings of the Eleventh Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, 1985.
38. Haghghi, R. G., and Konya, C. J., "The Effect on Bench Movement with Changing Blasthole Length," Proceedings of the Eleventh Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1985.
39. Ludquist, R. G., and Konya, C. J., "A Comparison of Costs of Mechanical and Explosive Comminution," Preprint No. 85-112, SME-AIME Annual Meeting, February 1985.
40. Haghghi, R. G., Konya C. J., and Lundquist, R. G., "Finite Element Modeling of Rock Breakage Mechanism," Proceedings of the 26th Symposium on Rock Mechanics, Rapid City, 1985.

41. Konya, C. J., Barrett, D., and Smith, Jr., E., "Presplitting Granite Using Pyrodex, A Propellant," Proceedings of the Twelfth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1986.
42. Konya, C. J., and Smith, Jr., E., "In-Plant Demolition of 900 Cubic Yard Machine Base," Proceedings of the Twelfth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1986.
43. Haghghi, R. G., and Konya, C. J., "Effects of Geology on Burden Displacement," Proceedings of the Twelfth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1986.
44. Bhushan, V., Konya, C. J., "Effect of Detonating Cord Downline on Explosive Energy Release," Proceedings of the Twelfth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1986.
45. Konya, C. J., Britton, R. R., and Lukovic, S. S., "Charge Decoupling and Its Effect on Energy Release and Transmission for One Dynamite and Water Gel Explosive," Proceedings of the Thirteenth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio 1987.
46. Konya, C. J., "Controlling Back-Break with Proper Borehole Timing," Proceedings of the Thirteenth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1987.
47. Konya, C. J., "Accurate Blasthole Timing Reduces Blasting Cost," Mine and Quarry, England, April 1987.
48. Konya, C. J., and Lukovic, S. S., "Misfired Blastholes Cost Plenty," Coal Mining, July 1987.
49. Konya, C. J., and Lukovic, S. S., "Some Blasthole Priming Methods Can Double Your Costs," Coal Mining, August 1987.50.
50. Konya, C. J., and Walter, E. J., "Blasthole Timing Controls Vibration, Air Blast and Flyrock," Coal Mining, January 1988.
51. Konya, C. J., and Lukovic, S. S., "Blasting Misfire Can Be Costly," Rock Products, January 1988.
52. Konya, C. J., "Problems with Malfunctioning Blastholes," Society of Mining Engineers, Preprint Number 88-30, January 25-28, 1988.
53. Konya, C. J., "Problems with Malfunctioning Blastholes," Proceedings of the Fourteenth Conference of Explosives and Blasting Technique, Society of Explosives Engineers, Montville, February 1988.
54. Konya, C. J., "Priming Methods Reduce Cost," Rock Products, March 1988.
55. Konya, C. J., and Walter E. J., "Timing Controls Blasting Effects," Rock Products, June 1988.
56. Konya, C. J., "High Precision Cap Accuracy," Proceedings of the Fifteenth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, New Orleans, Louisiana, 1989.

57. Myers, T. R., Lundquist, R., and Konya, C. J., "Computer-Aided Design of Ring Blasts," Proceedings of the Sixteenth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Orlando, Florida, 1990.
58. Konya, C. J., "Designing Blasts with Uncertainty and Tolerance," Proceedings of the Sixteenth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Orlando, Florida, 1990.
59. Konya, C. J., "Blasting Databases: A Unique Method for Saving and Retrieving Blasting Data," Proceedings of the Seventeenth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Orlando, Florida, 1991.
60. Konya, C. J. and Bedrosian, O., "Computers - The Blasters Most Powerful Tool," Journal of Explosives Engineers, Volume 7, Number 6, March/April 1990.
61. Konya, C. J. and Bedrosian, O., "Getting Started with Computers," Journal of Explosives Engineers, Volume 8, Number 1, May/June 1990.
62. Konya, C. J. and Bedrosian, O., "The Operating System," Journal of Explosives Engineers, Volume 8, Number 2, July/August 1990.
63. Konya, C. J. and Bedrosian, O., "Managing Files," Journal of Explosives Engineers, Volume 8, Number 4, November/December 1990.
64. Konya, C. J. and Bedrosian, O., "Calculating Distance and Azimuth Between the Blast and the Monitor," Journal of Explosives Engineers, Volume 8, Number 6, March/April 1991.
65. Dr. Földesi János - Mészáros László - Dr.h.c. Konya, C. J., "A Bányászati és ipari robbantástechnika számítógé-pes támogatása," Proceedings of microCAD '91 Nemzetközi Számítástechnikai Találkozó, Miskolc, Hungary, 1991.
66. Konya, C. J., Bowles, J. K., "Vibration and Air Blast Levels of Natural Phenomena and Normal Activities Compared to Levels of Blasting," Proceedings of the Eighteenth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Orlando, Florida, 1992.
67. Konya, C. J., Foldesi, J., "Bridge Demolition without Disruption of Railroad Traffic: A Case History," Proceedings of the Eighteenth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Orlando, Florida, 1992.
68. Konya, C. J., Case, Lou, Burchet, Harry, Ross, Paul, "Harlan Diversion Project - Upstream Portal Blasting," Proceedings of the Nineteenth Annual Conference on Explosives and Blasting Technique, Society of Explosives Engineers, San Diego, California, 1993.
69. Dr.h.c. Konya, C. J., "Emulziós Robbanóanyag Használatának Előnyei," Proceedings of Fúrás-Robbantástechnika, Miskolc, Hungary, 1993.
70. Dr. Földesi János - Mészáros László - Dr. Konya, C. J., "A Bányászati Robbantástechnika Számítógépes Támogatása," Proceedings of Fúrás-Robbantástechnika, Miskolc, Hungary, 1993.
71. Konya, C. J., "Misleading Initiator Costs," Coal Today, Volume 5, Number 7, July 1994.
- 72.** Konya, C. J., "Vibration Levels of Natural Phenomena Compared to Levels of Blasting," Engineering and Mining Journal, May 1995.

73. Konya, C. J., "Porovnanie seizmických účinkov pre rôzne druhy vibrácií," Trhacia 1995, Slovakia, June 1995.
74. Konya, C. J., "Psychological Effects of Vibration," Engineering & Mining Journal, July 1995.
75. Konya, C. J., "Detonating Cord Downlines Cause Energy Losses," Engineering & Mining Journal, September 1995.
76. Konya, C. J., "Uj Robbanoanyagok es Robbantasi Modszerek az Amerikai Egyesult Allamokban," A "Furas-Robbantastechnika 1995" C. Konferenci Eloadasai, Hungary, October 1995.
77. Konya, C. J., "Priming Blasting Agents," Engineering and Mining Journal, November 1995, Vol. 196, No. 11, Page 41.
78. Konya, C. J., "Tecnology Explodes On To The Blasting Scene," World Coal, January 1996.
79. Konya, C. J., "Trouble Shooting Problem Blasts," Engineering & Mining Journal, January 1996, Vol. 197, No. 1, Page 47.
80. Konya, C. J., "Trouble Shooting Problem Blasts," Coal Magazine, February 1996, Page 30.
81. Konya, C. J., "Drilling Accuracy: The Key to Successful Blasting," Engineering & Mining Journal, March 1996, Vol. 197, No.3, Page 78.
82. Konya, C. J., "Simple Equipment for Blast Diagnostics," Engineering & Mining Journal, May 1996, Vol. 197, No. 5, Page 63.
83. Konya, C. J., "Problems Associated with Deck Loaded Blastholes," Engineering & Mining Journal, July 1996, Vol. 197, No. 7, Page 73.
84. Konya, C. J., "Comparison of Different Blast Design Methods," Engineering & Mining Journal, September 1996, Vol. 197, No. 9, Page 80-85.
85. Konya, C. J., "New Developments in Blasting Technology and Explosives in the United States," Proceedings of Furas-Robbantastechnika, Miskolc, Hungary, 1995.
- 86.
87. Konya, C. J., "Blasting Review & Maintenance Program," Engineering & Mining Journal, November 1996, Vol. 197, No. 11, Page 74-78.
- 88.
89. Konya, C. J., "Boulder Reduction in Blasting," Engineering & Mining Journal, January 1997, Vol. 198, No. 1, Page 41.
90. Konya, C. J., "Optimizing Blasthole Spacing," Engineering & Mining Journal, March 1997, Vol. 198, No. 3, Page 69.
91. Konya, C. J., "Presplitting for Wall Control," Engineering & Mining Journal, May 1997, Vol. 198, No. 5, Page 45.
92. Konya, C. J., "Blasting Consultants: Know What You Get," Engineering & Mining Journal, July 1997, Vol. 198, No. 7, Page 28.
93. Konya, C. J., "Back to Basics," Engineering & Mining Journal, September 1997, Vol. 198, No. 9.

94. Konya, C. J., "Old Problems Keep Resurfacing," Engineering & Mining Journal, November 1997, Vol. 198, No. 11, Page 92.
95. Konya, C. J., "Post Shot Procedures," Engineering & Mining Journal, January 1998, Vol. 199, No. 1, Page 27.
96. Konya, C. J., "Proper Charge Placement," Engineering & Mining Journal, March 1998, Vol. 199, No. 3.
97. Konya, C. J., "Back to Basics," Engineering & Mining Journal, January 2000, Vol. 201, No. 1.
98. Konya, C. J., "Back to Basics," Coal Age, January 2000, Vol. 105, No. 1.
99. Konya, C. J., "Back to Basics," Rock Products, January 2000, Vol. 103, No. 1
100. Konya, C. J., "Controlling Drilling and Blasting Costs", Drill & Blast Review, Summer 2001, Vol 6, No. 3.
101. Konya, C. J., "Increasing Mining efficiency and Profits", Rock Products, January 2001, Vol. 202, No. 1
102. Spagna, Steven S., Konya, C. J., L.G., Smith, Ed, "Utilization of Detonation Cord to Pre-Split Pennsylvanian Aged Sandstone and Shale, Grundy, Virginia", Proceedings of ISEE Conference on Explosives & Blasting Technique, February 2005.

BOOKS AND REPORTS

103. Co-author, Investigation of the Use of Shaped Explosive Charges for Increasing the Permeability of Coal, U. S. Bureau of Mines, Contract No. G0.01590, (Min-36), 1971.
104. Co-author, Technology Forecast of the Coal Extraction Process, U. S. Bureau of Mines, S-0241-069, 1974.
105. Konya, C. J. (Ed), Proceedings of the First Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Morgantown, West Virginia, 1975.
106. Konya, C. J. (Ed), Proceedings of the Second Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Morgantown, West Virginia, 1976.
107. Co-author, In-situ Coal Liquefaction, U. S. Bureau of Mines, Contract No. J0265039, 1977.
108. Konya, C. J. (Ed), Proceedings of the Third Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Morgantown, West Virginia, 1978.
109. Konya, C. J. (Ed), Proceedings of the Fourth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Morgantown, West Virginia, 1978.
110. Co-author, In-situ Coal Liquefaction, ERDA Contract No. EF 77-5-05-557 9, 2978.
111. Konya, C. J. (Ed), Proceedings of the Fifth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio 1979.

- 112.Konya, C. J. (Ed), Proceedings of the Sixth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1981.
- 113.Konya, C. J. (Ed), Proceedings of the Seventh Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1981.
- 114.Co-author, Mined Land Reclamation by Biological Reactivation, Office of Surface Mining, Contract No. G 5195037, 1981.
- 115.Co-author, Control of Air Blast and Excessive Ground Vibration by Use of Efficient Stemming, Office of Surface Mining, Contract No. G 5195034, 1981.
- 116.Co-author, Blasthole Depth and Stemming Height Measuring Systems, USBM Contract No. J0208022, 1981.
- 117.Konya, C. J. (Ed), Proceedings of the Eighth Conference on Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1982.
- 118.Konya, C. J., and Walter, E. J., Chap. 6 - "Blast Monitoring," Surface Mining Environmental Monitoring and Reclamation Handbook, Sendlein, L.V.A. et al., Ed. New York, Elsevier Scientific Publishing Co., Montville, Ohio, 1983.
- 119.Konya, C. J., (Ed), Proceedings of the Ninth Conference of Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1983.
- 120.Konya, C. J., (Ed), Proceedings of the Tenth Conference of Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1984.
- 121.Konya, C. J., (Ed), Proceedings of the Eleventh Conference of Explosives and Blasting Technique, Society of Explosives Engineers, Montville, Ohio, 1985.
- 122.Konya, C. J., and Walter, E. J., "Rock Blasting Manual," Federal Highway Administration, 1985.
- 123.Konya, C. J., and Walter, E. J., "Surface Blast Design," Prentice Hall Publishing, Englewood, New Jersey, 1990.
- 124.Konya, C. J. and Walter, E. J., "Rock Blasting and Overbreak Control," Federal Highway Administration, 1992.
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REPRESENTATIVE CLIENTS

Alaska Dept. of Transportation
Akzo Salt
Alcoa
Amax Coal Company
American Limestone Company
Ashville Contracting Company
Austin Powder Company
Barnard Construction
Bureau of Reclamation
BHP Diamonds
Canadian Department of Justice
Canadian Powder Company
Cinchfield Railroad
Chemical Lime-MO
Citrus County, Florida
Consolidation Coal Company
C.S. McCrossen Construction
Dames and Moore
Dixie Lime and Stone
Dufferin Quarry
DuPont of Mexico
Enaex S.A.
Ensign Bickford Company
Florida Rock
Foster Miller Associates
Great Canada Oil Sands, Ltd.
Green Construction Company
Gulf Explosives
Halco Mining
Haley & Aldrich
Hanson Quarries
Hercules Powder
Hi-Tech Rockfall
Holcim
Illinois Laborers & Contractors
Ingersoll Rand
Kentucky Department of Mines & Minerals
Meridian Aggregate
MESA
Milton Quarry
Monsanto
Morrison Knudsen Company
Nello Teer Company
North Carolina Dept. of Transportation
Occidental Oil Shale, Inc.
Ohio Department of Natural Resources
Ohio Shale Gas
Old Ben Coal Company
Oregon Dept. of Transportation
Panama Canal Commission
Pittsburgh and Midway Coal Company
Reece Albert Incorporated
Rinker Quarries
River Cement
Rock of Ages
Sandia Laboratories
Sloan Construction
Southeastern Metropolitan Coal Company
St. Joe Minerals Corporation
Stone & Webster Engineering
Sunstrand Data Control Incorporated
U S Borax
United States Army Corp. of Engineers
United States Bureau of Mines
United States Forest Services
United States Navy
U S Silica
U.S. Steel
University of Nevada
University of Utah
Vulcan Materials Southern Division
Vulcan Materials Mideast Division
Vulcan Materials Midwest Division
Vulcan Materials Mexico
Waste Management
White Rock Quarries
W.M. Brode Company
Wallace Stone Plant
Western Mining Company
Woodville Lime and Chemical Company

SPECIFIC EXAMPLES OF DIFFICULT BLASTING PROJECTS

Decatur Alabama - Designed and conducted blasts inside the Saginaw Gear Plant of General Motors to remove a 900 cubic yards of heavily reinforced concrete. The area removed was 50 feet by 200 feet. The blasting was safely conducted within 5 feet of a new 10 million dollar machine and with operating equipment and personnel within 50 feet of the blasting area.

Atlanta Georgia - Consulted for Georgia Power and designed blasts for large caissons at the construction of an addition for the power plant

Cleveland Ohio - Designed all blasts and vibration control for 20 to 25 foot diameter shafts for (Marra Majestic) Metropolitan Sewer District project. Some blasting for shafts was within 50 feet of homes.

St Catharines, Ontario - Consulted for design of blasts and wrote specifications for blasting of concrete from lock walls on the Welland canal for St Lawrence Seaway commission.

Albany, New York - Erie Canal Consulted and designed blasts for lock re-lining project on the Erie Canal

Panama Canal - Consulted on blast design for underwater blasting on the Panama Canal widening project.

Baltimore Maryland - Metro Designed blast and vibration control for shafts and tunnels and open cuts on the Mondawmin station with structures within 25 feet of the excavation.

San Angelo, Texas - Designed and conducted blasts with emphasis on vibration control for a major sewer line project on main street. Buildings were within 25 feet of blasts.

Inland Lake, Alabama - Designed blasts and vibration control under 135 feet of water for the new water intake structure in Inland Lake for City of Birmingham. Contractor was TIC Corp.

Arizona - Designed blasts for water intake structure under 200 feet of water for Roosevelt Dam reconstruction project

Dayton Ohio - Designed blasts and vibration control for major mass rock blasting construction project using 6 inch diameter blastholes within 300 feet of 1200 foot high TV towers

Kansas - Designed blasts for the demolition of Titan 2 missile silo's in Arkansas and Kansas

REPRESENTATIVE RECENT OR CURRENT PROJECTS

Cooper River Bridge – Designed pier blasts for removal of 100 foot high piers some adjacent to and under new 750 million dollar bridge (ongoing)

Panama Canal, Panama – Worked with design engineers with blast designs for the deepening of the canal (2005)

Martin, Kentucky - Consultant for Bush and Burchett Contractors responsible for wall control production blasting and vibration control on City of Martin Redevelopment Site Project. Project started October 2004 and is on-going

Grundy Virginia – Consultant for Bush and Burchett Contractors responsible for wall control production blasting and vibration control on Grundy Redevelopment Site Project. Project started July 2003 and completed May, 2004.

Northwest Territories, Canada - Designed special blasting methods for wall control for 1000 foot deep pits for BHP Diamond Mine. The methods used provide the steepest stable pit slopes of any open pit mine in the world. Consultancy ongoing since 2000.

Ketchikan Alaska - Blasting consulting for the state of Alaska for the 3rd Avenue Bypass Project which involved extremely difficult blasting conditions for mass rock excavation. The blasting occurred in a cliff area that was within 85 feet horizontally and above homes. Worked on both phase one (2000) and phase two of the project. Vibration control was critical. Project completed April, 2003

Tucuruí Brazil - Tucuruí power project, designed blasts to remove 2,000,000 cubic yards of Diabase rock in tailrace 2 of the worlds largest Hydroelectric Dam. The blasting took place at the operating power plant and within 20 meters from the energized main overhead transmission lines which were above blasting area.

Tucuruí Brazil - Tucuruí power project, designed blast to remove 1000 foot long Diabase dike separating the new tailrace from the river. The dike had 45 feet deep water against the dike on the downstream side. Blasting had to displace and push the rock from the dike into prepared trench dug behind dike. The blasted rock had to move into the deep trench so that underwater excavation of blasted rock was not needed. The blasting area had main energized overhead transmission lines within 20 meters above blast area. The Blast was successfully completed on December 19, 2002.

California – Consultant for the US Army Corp of Engineers for the Blasting and vibration control within Folsom Dam for the enlargement of the conduits. (Project ongoing)

Grundy Virginia – Consultant for the US Army Corp of Engineers on wall control, production blasting and vibration control on Grundy Redevelopment Site Project. Project started May 2002 and completed July, 2003. Later contracted to do the blasting and wall control for prime contractor, Bush and Burchett, on project (July 2003 to June 2004).

