

Shotcrete Bibliography

Compiled By D.R. (Rusty) Morgan, Ph. D.

I was asked by the ASA Executive Committee to prepare a bibliography of shotcrete reference publications that would provide owners, designers/specifiers, suppliers, contractors and testing companies with useful information concerning the various aspects of shotcrete technology. I started by going to the ACI CD-ROM Concrete Abstracts Quick Search and obtained over 300 hits with the word *shotcrete* in the search index. It became readily apparent that assembling a detailed compilation of all the shotcrete papers published would be a very onerous task and probably not that useful. So I decided to take another tack: I simply went to my personal library and pulled out those shotcrete publications to which I have referred most frequently, and found most useful over the past two decades.

The following is a compendium of these publications. For convenience, the documents have been subdivided into:

- Guides and Standards
- Conferences, Symposia and Workshops
- Books, Compilations and Corporate Publications.

No attempt has been made to list the names of individual papers. (Over 200 individual papers are included in the listed Conferences, Symposia and Workshops).

As an engineer designing/specifying and doing shotcrete quality assurance monitoring and quality control testing on shotcrete projects, as well as extensive shotcrete research and development work (both in-house and in corroborations with universities in Canada, the USA and Australia) I have found these publications very useful. Perhaps there are other publications not listed in this bibliography that you have found particularly useful. If so, please forward details to me and I will compile them for issue as a later addendum to this publication list. Please send to:

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Guides and Standards

American Concrete Institute (ACI)

ACI 506R-90 Guide to Shotcrete

ACI 506.2-95 Specifications for Shotcrete

ACI 506.1R-84 (Reapproved 1995) State of the Art Report on Fiber Reinforced Shotcrete

ACI 506.3R-91 Guide to Certification of Shotcrete Nozzlemen

ACI 506.4R-94 Guide for the Evaluation of Shotcrete

American Society for Testing and Materials (ASTM)

ASTM C42-94 Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete

ASTM C1018-94b Standard Test Method for Flexural Toughness and First-Crack Strength of Fiber Reinforced Concrete (Using Beam With Third Point Loading)

ASTM C1102-94 Standard Test Method for Time of Setting of Portland Cement Pastes Containing Quick Setting Admixtures for Shotcrete by the Use of Gillmore Needles

ASTM C1116-91 Standard Specifications for Fiber Reinforced Concrete and Shotcrete

ASTM C1117-89 Standard Test Method for Time of Setting of Shotcrete Mixtures by Penetration Resistance

ASTM C1140-89 (Reapproved 1994) Standard Practice for Preparing and Testing Specimens from Shotcrete Test Panels

ASTM C1117-89 Standard Specification for Admixtures for Shotcrete

American Association of State Highway and Transportation Officials (AASHTO), The Associated General Contractors of America (AGC) and American Road & Transportation Builders Association (ARTBA).

AASHTO-AGC-ARTBA Task Force
37 Report, *Guide Specifications for
Shotcrete Repair of Highway
Bridges*.

**European Federation of Producers
and Applicators of Specialist
Products for Structures
(EFNARC).**

EFNARC *European Specification for
Sprayed Concrete*.

**International Tunnelling
Association**

*Shotcrete for Rock Support, Guide-
lines and Recommendations—A
Compilation*, Editor B. Malmberg,
Published by Swedish Rock
Engineering Research Foundation,
Stockholm, Sweden, December,
1993, pp. 82.

Concrete Institute of Australia

*Recommended Practice: Sprayed
Concrete*, February, 1987, pp. 39.

**Conferences, Symposia
and Workshops**

**Engineering Foundation, New
York, Published by American
Society of Civil Engineers:**

- Shotcrete for Underground Support
V, Uppsala, Sweden, June 3-7,
1990 (42 papers).
- Shotcrete for Underground Support
VI, Niagra-on-the-Lake, Ontario,
Canada, May 2-6, 1993 (22
papers).
- Shotcrete for Underground Support
VII, Telfs, Austria, June 11-15,
1995 (33 papers).

Norwegian Concrete Association:

- *International Symposium on
Sprayed Concrete—Modern Use of
Wet Mix Sprayed Concrete for
Underground Support*, Fagerness,
Norway, 1993.
- *Second International Symposium
on Sprayed Concrete—Modern Use
of Wet Mix Sprayed Concrete for
Underground Support*, Gol,
Norway, Sept. 23-26, 1996 (39
papers).

Shotcrete Symposium: *Techniques,
Procedures and Mining Applica-
tions*, Kalgoorlie, Western Austra-
lia, 1996, Editor, C. Windsor, (12
papers).

Sprayed Concrete Technology, The
Proceedings of the ACI/SCA
International Conference on
Sprayed Concrete/Shotcrete,
Edinburgh University, Sept. 10-11,
1996, Editor, S.A. Austin, Pub-
lished by E & FN Spon. (31
papers).

**Books, Compilations and
Corporate Publications**

*Sprayed Concrete: Properties Design
and Application*, Editors S. Austin
and P. Robins, 1995, Published by
Whittles Publishing, Scotland,
pp. 375.

Shotcrete for Rock Support, Editor
T.A. Melbye, MBT Europe, 1994,
pp. 152.

Tunnelling the World, Editor M.
Vandewalle, N.V. Bekaert SA,
Belgium, 1990, pp. 218.

Dry-Mix Shotcrete Nozzling, Editor
T. Crom, Crom Corporation,

Gainesville, Florida, USA, 1985,
pp. 40.

Shotcrete, Editor P. Teichert, Laich
SA, Avegno, Switzerland, 1981,
pp. 89.

Spritzbeton, Editor, P. Teichert, Laich
SA, Avegno, Switzerland, 1991,
pp. 152 (in German, French and
Italian).

American Concrete Institute,
*Shotcrete, A Compilation of
Concrete International Shotcrete
Publications*, 1992, pp. 76.

American Concrete Institute, *Applica-
tion and Use of Shotcrete*, A
Compilation of ACI Shotcrete
Publications, 1981, pp. 92. 

