

## REFERENCES

Al-Hamed A.H. and Swamy N.R., The use of pulse velocity measurements to estimate strength of air-dried cubes and hence in situ strength of concrete, Malhotra V.M., Ed., ACI SP 82, American Concrete Institute, Farmington Hills, MI, 1984, 247

Andrews D.R., Future prospects for ultrasonic inspection of concrete. Proceedings of the Institution of Civil Engineers-Structures and Buildings, 99, Feb. 1993, pp. 71-73

ASTM C597-16, Standard Test Method for Pulse Velocity Through Concrete, Book of Standards Volume: 04.02, 2009

BS 1881: Part 203: 1986, Testing Concrete, Part 203. Recommendations for measurement of velocity of ultrasonic pulses in concrete

BS EN 12504-4, Testing Concrete- determination of ultrasonic pulse velocity, British Standards Institution, London

Bullock R.E. and Whitehust E.A., Effect of certain variables on pulse velocities through concrete, Highway Res. Board Bull., 206, 37, 1959

Bungey J.H., The validity of ultrasonic pulse velocity testing of in-place concrete for strength, NDT International, IPC Press, Dec. 1980, pp. 296-300

Bungey J.H. and Malhotra V.M., The influence of Reinforcement on Ultrasonic Pulse Velocity Testing, ACI SP 82, American Concrete Institute, Farmington Hills, MI, 1984, 229

Bungey J.H., Ultrasonic testing to identify alkali-silica reaction in concrete, British Journal of Non-Destructive Testing, 33, No. 5, 1991, pp. 227-231

Bungey J.H., Millard S.G. & Grantham M.G., "Testing of Concrete in Structures", Fourth Edition, Taylor & Francis, 2006, pp. 51-81

Fazli Z.T.M., Nizam U.L., Abdeen U.L.S., "Use of Ultrasonic Pulse Velocity Measurements to estimate concrete wall thickness", E/2004/010, Final Year Project, University of Peradeniya

Guha S.K. and Wedpathak A.V., The practical use of ultrasonic pulse velocity measurements in the assessment of concrete quality, Discussion on a paper published in Magazine of Concrete Research, Volume 32, Number 110: March 1980, pp 61-64

Hillger W., Imaging of defects in concrete by ultrasonic pulse-echo technique. Proc. Struct. Faults and Repairs 93, Eng. Technics Press, Edinburgh, 3, 1993, pp. 59-65

Hoegh K., Khazanovich L., Yu H.T., "Ultrasonic Tomography Technique for Evaluation of Concrete Pavements." Transportation Research Record: Journal of the Transportation Research Board, No. 2232, pp. 85-94, 2011

Hogarth C.A. and Blitz J., Techniques of Non-Destructive Testing, London, Butterworths, 1960, pp. 83-103

Jones, R., The application of ultrasonic to the testing of concrete. Research, London, 383, pp.364-368, 1948

Jones R., Discussion on the Ultrasonic Testing of Concrete, The Structural Engineer, Vol. XXXIII, No. 10, pp. 190-206, 322, 1955

Jones R., Non-Destructive Testing of Concrete, Cambridge University Press, London, 1962.

Jones R., Testing of concrete by an ultrasonic pulse technique, RILEM Int. Symp. on Nondestructive Testing of Materials and Structures, Paris, Vol. 1, Paper No. A-17 January 1954, 137. RILEM Bull., 19(Part 2), Nov. 1954

Jones R. and Facaoaru I., Recommendations for testing concrete by the ultrasonic pulse method, Materials and Structures Res. Testing (Paris), 2(19), pp. 275-284, 1969

Kaplan M.F., Compressive strength and ultrasonic pulse velocity relationships for concrete in columns, ACI J., 29(54-37), 675, 1958

Kaplan M.F., The effects of age and water to cement ratio upon the relation between ultrasonic pulse velocity and compressive strength of concrete, Mag. Concr. Res., 11(32), 85, 1959

Koehler B., Hentges G. and Mueller W., Improvement of ultrasonic testing of concrete by combining signal conditioning methods, scanning laser vibrometer and space averaging techniques, NDT&E International, 31, No. 4, 1998, pp. 281-287

Kroggel O., Ultrasonic examination of crack structures in concrete slabs. Proc. Struct. Faults and Repairs 93, Eng. Technics Press, Edinburgh, 3, 1993, pp. 67-70

Krause M., Wiggenhauser H., Ultrasonic Pulse Echo Technique for Concrete Elements Using Synthetic Aperture, UOnline Application Workshop in May 1997, Vol.2 No. 05

Krause M., Wiggenhauser H., Krieger J. and Schickert M., NDE of a post tensioned concrete bridge girder using ultrasonic echo and impact echo. Proceedings of Structural Faults and Repair 2003, Eng. Technics Press, Edinburgh, 2003, CD-ROM

Krause M., Mielentz F., Milmann B., Streicher D. & Muller W., Ultrasonic imaging of concrete elements: state of the art using 2D synthetic aperture. Proc. NDT-CE 03, DGZfP, Berlin, 2003, CD-ROM

Leslie, J.R. and Cheesman, W.J., 1949. An ultrasonic method of studying deterioration and cracking in concrete structures. Journal of the American Concrete Institute, 21(1), pp.17-36.

Mackenzie, J.K., 1950. The elastic constants of a solid containing spherical holes. Proceedings of the Physical Society. Section B, 63(1), p.2.

Malhotra V.M., Testing hardened concrete: Non-destructive methods. Monograph 9, American Concrete Institute, Detroit, 1976

Nogueira C.L. and Willam K.J., Ultrasonic testing of damage in concrete under uniaxial compression, ACI Materials Journal, 98, No. 3, May-June 2001, 265-275

Pavlakovic B., Lowe M.J.S. & Cawley P., The inspection of tendons in post tensioned concrete using guided ultrasonic waves. INSIGHT- Journal of the British Institute of Non-Destructive Testing, 41, No. 7, July 1999, pp. 446-452

Popovics S. and Popovics J.S., Effect of stresses on the ultrasonic pulse velocity in concrete, RILEM Mater. Struct., 24, 15, 1991

Prassianakis I.N. and Giokas P., Mechanical Properties of old concrete using destructive and ultrasonic non-destructive testing methods, Magazine of Concrete Research, 2003, 55, No. 2, April, pp. 171-176

Raišutis R., Voleišis A., Kažys R., Application of the through transmission ultrasonic technique for estimation of the phase velocity dispersion in plastic materials, ISSN 1392-2114 Ultragarsas (Ultrasound), Vol. 63, No. 3, 2008

Raj, Baldev ; Jayakumar, T ; Thavasimuthu, M., Practical Non-Destructive Testing, 3<sup>rd</sup> Edition, Publisher: Narosa, New Delhi, ISBN; 9788173197970, 2007

RILEM Recommendation NDT 1, Testing of concrete by the ultrasonic pulse method, Paris, Dec. 1972, pp.73-82

Sack D.A. and Olson L.D., Advanced NDT methods for evaluating concrete bridges and other structures. Proc. Struct. Faults and Repairs 93, Eng. Technics Press, Edinburgh, 1, 1993, pp. 65-76

Sandor Popovics, Joseph L. Rose, John S. Popovics, (1990), The behavior of ultrasonic pulses in concrete, Cement and Concrete Research, Volume 20, Issue 2, March 1990, Pages 259-270

Seals R.K. and Anderson D.A., Pulse velocity as a predictor of 28 and 90 day strength, ACI J., 78, 116, 1981

Sturup V.R., Vecchio R.J., and Caratin H., Pulse Velocity as a Measure of Concrete Compressive Strength, ACI SP 82-11, American Concrete Institute, Farmington Hills, MI, 1984, 201

Tarek Uddin Mohammed and Md Nafiur Rahman, Effect of types of aggregate and sand-to-aggregate volume ratio on UPV in concrete, Construction and Building Materials 125 (2016), pp. 832-841

Tarun R. Naik, V. Mohan Malhotra, John S. Popovics, The Ultrasonic Pulse Velocity Method, Chapter 8, "Handbook on Nondestructive Testing of Concrete", Second Edition, V.M. Malhotra and N.J. Carino, pp. 8-1 to 8-19, 2004

Tomsett H.N., Ultrasonic pulse velocity measurements in the assessment of concrete quality, Magazine of concrete research, 32, No. 110, March 1980, pp. 7-16

Turgut P., and Kucuk O.F. (2006), "Comparative Relationships of Direct, Indirect, and Semi-Direct Ultrasonic Pulse Velocity Measurements in Concrete, Russian Journal of Nondestructive Testing, November 2006.

Warusavitarana L.I, “Non Destructive Testing of Concrete”, Dissertation of Master of Engineering in Structural Engineering Design, Department of Civil Engineering, University of Moratuwa., 2006

Wu T.T. and Lin T.F., The stress effect on the ultrasonic velocity variations of concrete under repeated loading, *ACI Mater. J.*, 95(5), 519, 1998