



Air Void Systematics of Hardened Concrete

PRESENTATION SUMMARY

This informative, 60-minute presentation by Dr. Christopher R. Kelson, Ph.D., P.G. describes the air void system in hardened concrete, which is key to understanding its strength, durability, and especially resistance to freeze-thaw conditions.

HIGHLIGHTS

- Introduction to air in hardened concrete and the three types of air voids
- Air voids in hardened concrete: Good or bad?
- Components of total % air in hardened concrete
- Freeze/thaw damage of hardened concrete
- Evaluating the air void system in hardened concrete; overview of ASTM methods
- Discussion of air void systematics and terminology
- Factors that influence the % air in concrete

ABOUT THE PRESENTER

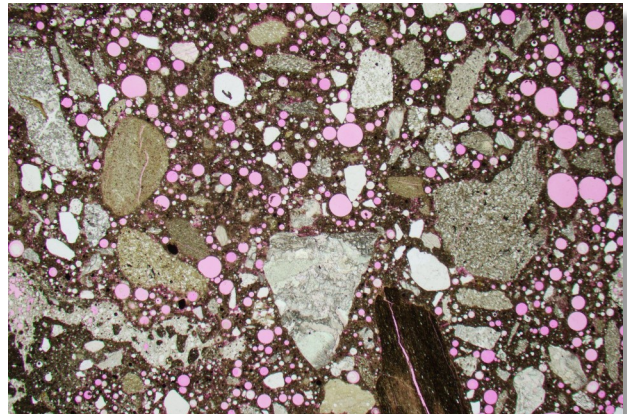
Dr. Christopher R. Kelson, Senior Geologist for Atlantic Testing Laboratories, holds a Ph.D. in Geology and is a licensed Professional Geologist in New York State. He has over 25 years combined years of experience within the precious metals mining industry and construction materials industry, almost 30 years of teaching and research experience at six different universities, and has also worked for the Utah Geological Survey. His specialties include petrography, geochemistry, mineralogy, petrology, geochronology, and economic geology with particular interest in optical mineralogy/petrography and geochemistry with respect to concrete, rocks, and minerals and using a myriad of microanalytical techniques and equipment. Dr. Kelson earned his Bachelor's Degree (Geology, 1994) from the University of Utah, Master's Degree (Geology, 1999) from Brigham Young University, and Ph.D. (Geology, 2006) from the University of Georgia. He is a native of Salt Lake City, Utah and currently resides in Potsdam, New York.

Freeze Thaw Damage Due to Inadequate Air Void Structure



https://greenpiece1.files.wordpress.com/2010/08/too_far_gone21.jpg

Air Void Distribution in Concrete



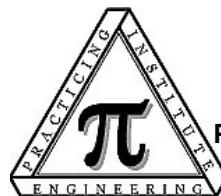
**Air voids = pink*

ASTM Petrography Methods

ASTM C856 - Standard Practice for Petrographic Examination of Hardened Concrete

ASTM C457 - Standard Test Method for Microscopical Determination of Parameters of the Air-Void System in Hardened Concrete

ASTM C295 - Standard Guide for Petrographic Examination of Aggregates for Concrete



1.0 Professional Development Hour*

*To confirm the acceptance of these PDHs outside of NYS, please consult the licensure board of that state.

TO SCHEDULE AN AIR VOID SYSTEMATICS OF HARDENED CONCRETE SEMINAR, CONTACT:

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