
Standard Method of Test for Pavement Thickness by Magnetic Pulse Induction

AASHTO Designation: T 359M/T 359-18 (2022)¹

Technically Revised: 2018

Reviewed but Not Updated: 2022

Editorially Revised: 2021

Technical Subcommittee: 3c, Hardened Concrete



**American Association of State Highway and Transportation Officials
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1. SCOPE

- 1.1. This test method covers the determination of the pavement thickness by using magnetic pulse induction. This method is intended for use with plain jointed concrete pavements, asphalt pavements, base courses with cement binders and unbound aggregate layers. It is not applicable for continuously reinforced, mesh reinforced, or fiber reinforced pavement where the metal reinforcement would interfere with the magnetic field.
- 1.2. The values stated in SI units are to be regarded as the standard.
- 1.3. *This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*
- 1.4. *The quality of the results produced by this standard are dependent on the competence of the personnel performing the procedure and the capability, calibration, and maintenance of the equipment used. Agencies that meet the criteria of R 18 are generally considered capable of competent and objective testing/sampling/inspection/etc. Users of this standard are cautioned that compliance with R 18 alone does not completely assure reliable results. Reliable results depend on many factors; following the suggestions of R 18 or some similar acceptable guideline provides a means of evaluating and controlling some of those factors.*

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
 - R 18, Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories
 - T 148, Measuring Length of Drilled Concrete Cores
- 2.2. *ASTM Standard:*
 - C802, Standard Practice for Conducting an Interlaboratory Test Program to Determine the Precision of Test Methods for Construction Materials

3. SUMMARY OF TEST METHOD

- 3.1. The method uses magnetic pulse induction technology to measure the thickness of one or several layers above a metal reflector. While scanning, the device generates a variant magnetic field that