

**QUALITY CONTROL DURING CONSTRUCTION OF BITUMINOUS
MIXTURES USING A SIMPLE AIR PERMEABILITY TEST**

By

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ABSTRACT

This paper presents an evaluation of a simple air permeameter for use in laboratory during the design stage or in the field for control of the quality and uniformity of pavements during the construction stage.

The values of air permeability are correlated statistically with the engineering parameters which describe the structural properties of a bituminous mixture and with parameters related to its composition. The statistical analysis indicates that permeability is strongly affected by binder content and that porosity of a mix can be predicted by using the measure of air permeability. The statistical analysis gives a ranking of the variables which affect permeability.

The test is easy to carry out, it takes a very short time to obtain readings for calculation of permeability and it is highly repeatable. The apparatus can be used in the laboratory and also during construction in the field.