

沥青混合料动态剪切模量主曲线的确定

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收稿日期 2007-9-13 修回日期 网络版发布日期 2009-1-15 接受日期

摘要 为了克服条件评价的局限性,

采用动态剪切流变仪对沥青混合料进行了连续动态频率扫描。获得了跨越15个数量级的动态模量随频率变化的主曲线, 进行了沥青混合料全温全频分析, 掌握了材料的黏弹性力学行为。通过讨论与分析, 提出了极限频率、流变区、稳态区、低频转折点、高频转折点等概念。研究表明, 动态流变试验是获得沥青混合料主曲线的有效方法, 主曲线为全温全频分析提供了基础条件, 基于主曲线形态提出的5个概念能够客观地反映混合料的本质特性。

关键词 [道路工程](#), [沥青混合料](#), [动态剪切模量](#), [主曲线](#), [全温全频分析](#)

分类号 [U416.217](#)

Determination of master curve of dynamic shearing modulus of asphalt mixture

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Abstract In order to overcome the limitation of the conditional evaluation, a dynamic frequency sweep of asphalt mixture was performed using a dynamic shearing rheometer, and the master curve of the dynamic modulus change with the frequency across 15 orders of magnitude was obtained. Based on the master curve, the full time full frequency analysis becomes possible to study the viscoelastic property of asphalt mixture. The concepts such as the ultimate frequency, the rheological region, the steady state region, the low frequency or the high frequency turning point, were presented after discussion and analysis. The study results indicate that the dynamic rheological test is an effective means to get the master curve of asphalt mixture which provides the sufficient conditions for the full temperature full frequency analysis. The 5 concepts derived from the form of the master curve reflect the essential properties of asphalt mixture.

Key words [road engineering](#) [asphalt mixture](#) [dynamic shearing modulus](#) [master curve](#) [full temperature](#) [full frequency analysis](#)

DOI:

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