

<<沥青路面与能源环境的可持续性发>>

图书基本信息

书名：<<沥青路面与能源环境的可持续性发展（配图书馆）>>

13位ISBN编号：9787560535746

10位ISBN编号：7560535747

出版时间：2010-6

出版时间：西安交通大学出版社

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页数：591

字数：1118000

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内容概要

Energy and environment play a significant role in the quality of life, world's economic growth, and stability. China, USA, and many other countries encounter significant challenges related to energy saving and environmental concerns in the construction and maintenance of sustainable highway pavement, which is one of the biggest infrastructures in China and the United States. To address these challenges, a high level academic workshop was held in June 6-8, 2010 at Chang'an University in Xi'an, China. This workshop is sponsored by the National Natural Science Foundation of China (NSFC), National Science Foundation (NSF-USA), and National Science and Technology Supporting Program of China (2006BAJ18B05).

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章节摘录

插图：1 Introduction Semi-rigid asphalt pavement is the typical structure of high rank pavement and has been widely used in china, but the semi-rigid base is easy to appear reflection crack and accumulate water, besides that, the contact condition and the fatigue resistance is also very poor. More over, these disadvantages are liable to be influenced by traffic load and weather conditions, therefore, the service life of semirigid asphalt pavement is not very long. Investigation of NCHRP and TRB research program " Design and Construction Factor to Pavement Performance Influence" has proved that the base type is the key factor to influence the pavement service ability. In all the base types, the asphalt treated base is considered to have the good performance and it is widely used in foreign countries. Recent years, in order to avoid the disadvantages of semi-rigid base and improve the service ability of asphalt pavement, a lot of researches on the pavement base type have been done in China, more and more attention have been paid to asphalt treated base, great deal of researches have been done on the molding method, mixture design method and service performance of the asphalt treated base. Put up the asphalt treated base on the top of semirigid base can significantly reduce the reflection crack, the ability of antireflection crack is the main feature for its widely use, but still now, there is no simple and practical test method of anti-fatigue crack ability. The evaluation of the anti-fatigue properties and there flection crack resistance ability of asphalt mixture is mostly based on the qualitative analysis or a few of full-scale tests. Due to the lack of test methods, the thorough experimental study and design optimization has not been conducted to the asphalt treated base.

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