

عنوان مقاله:

(Mechanical Behavior and properties of porous asphalt and self-healing porous asphalt(feasibility of use in Tunnels

محل انتشار:

دومین کنگره بین المللی مهندسی عمران، معماری، مصالح ساختمانی و محیط زیست (سال: 1401)

تعداد صفحات اصل مقاله: 11

نویسندگان:

S Amin - *Department of civil engineering, science and research branch, Islamic Azad University*

A Tavana - *Department of civil engineering, science and research branch, Islamic Azad University*

M Rajabpour - *Department of Mechanical Engineering, Faculty of Engineering, Semnan Branch*

A Fereidoon - *Faculty of Mechanical Engineering, Semnan University, Semnan, Iran*

خلاصه مقاله:

With the increase in population and the expansion of cities, the need for inter-road access is felt more than ever and road maintenance has always been expensive. Climatic conditions due to changing seasons and rain and snow reduce the life of asphalt and road crashes kill many people every year. Ordinary asphalt has problems that usually cause problems in transportation, which is recommended to be replaced by porous asphalt. Research has shown that self-healing porous asphalt is more efficient than other pavements. As a novel concept, self-healing asphalt aims to produce a sustainable asphalt pavement by using self-healing technology to stimulate and improve the healing capacity of bituminous materials, so that damages can be self-repaired which finally prolongs the service life of asphalt pavement. Porous asphalt, aimed to produce a sustainable asphalt pavement using green technology, has been studied in the past two decades. This paper look into the performance of porous asphalt, advantage, disadvantage and friendship with the environment, also self-healing porous asphalt properties by self-healing technology to stimulate and improve the healing capacity of bituminous materials represented. Porous asphalt is used in many European countries, mainly in order to reduce traffic noise and increase road capacity. Porous asphalt differs from ordinary dense asphalt concrete by having an open structure with approximately ۲۰-۲۵% air filled pores. The open structure of porous asphalt reduces traffic noise, drains water from the road surface and reduces thermal conductivity.

کلمات کلیدی:

self-healing asphalt, self-healing porous asphalt, self-healing material

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1566528>



