

ABSTRACT

Large percentage of the Portuguese road network is formed by flexible pavements, which have been subject to an action of traffic increasingly intense and aggressive, the latter at the end of its useful life. There is therefore a great need to rehabilitate these pavements.

However, the rehabilitation of pavement generates a large quantity of waste, which is, from an environmental standpoint, a major problem. Thus, in response to this problem, the solution is the reuse of materials from the floor in service that are damaged and have already lost much of its initial properties, developing, or even better, the initial properties of the material that cutter .

The technique used in this paper for recycling is the warm-mix recycling, which eliminate some of the limitations of cold recycling and hot recycling. The functional requirements relating to safety and comfort of the user of a road, along with environmental concerns, have increased considerably, leading thus to the need for floor increasingly resistant and durable.

However, the functional characteristics of a surface evolve over time, not only due to wear on the surface created by the passage of vehicles, but also due to the action of atmospheric agents, especially the rain.

Thus, it is intended with this work, analyze the behavior of bituminous mixtures with warm-mix recycled, when subjected to the action of water and then the frost-thaw action.

This will consist of an assessment of the impact caused by water under the conditions of service of a floor, through the resistance obtained after the application of the methodology proposed to immersion-compression and the frost-thaw bituminous materials collected for EN 244 - launched between Ponte de Sôr and the proximity of Gavião.

Key words: Recycling of warm-mix, frost-thaw cycles, sensitivity to water, Indirect Tensile strength, resistance index maintained.