

# Durable high strength cement concrete topping for asphalt roads

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**Abstract.** Work on improving riding qualities of pavements by means of placing a thin cement layer with high roughness and strength properties on the existing asphalt pavement were conducted in Ukraine for the first time. Such pavement is called HPCM (High Performance Cementitious Material). This is a high-strength thin cement-layer pavement of 8-9 mm thickness reinforced with metal or polymer fiber of less than 5 mm length. Increased grip properties are caused by placement of stone material of 3-5 mm fraction on the concrete surface. As a result of the research, the preparation and placement technology of high-strength cement thin-layer pavement reinforced with fiber was developed to improve friction properties of existing asphalt pavements which ensures their roughness and durability. It must be emphasized that HPCM is a fundamentally new type of thin-layer pavement in which a rigid layer of 10 mm thickness is placed on a non-rigid base thereby improving riding qualities of asphalt pavement at any season of a year.