Thesis Title	Cement Stabilisation of Old Asphalt Concrete
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Abstract

Rehabilitation of the existing roads by employing the new construction materials will be expensive, especially for the roads that far from the material sources. The cost of excavating the existing asphalt surface out and constructing the new pavement layers sometimes is relatively high. The technique of pavement recycling is introduced in order to improve the existing pavement materials for use as part of the layers of the new pavement structure. This technique tend to save the resources and reduces the pollution as a result of the construction activities.

Old asphalt concrete surface after serving the traffic for years were deteriorated and could not function properly as asphalt surface. Conventionally it will be removed before the new pavement layers are constructed over. However, this old asphalt concrete surface is expected to be recycled by mixing with cement and used as a part of the pavement structure by considering to be soil-cement base or subbase.

Old asphalt concretes used in this research project are from Bangkok and Udorn Thani Provinces. Both old asphalt concretes, after mixing with cement at 1, 3, 5 and 7 percent by weight and curing for 1, 3, 7, 14 and 28 days, induce the higher

UCS and Unsoaked CBR. This indicates that old asphalt concrete could be recycled for used as soil-cement base by mixing with appropriate amount of cement content.

After mixing with 50 percent crushed rock before adding cement, maximum dry density will be increased. The addition of cement to the mixture of old asphalt concrete and crushed rock will induce very high values of UCS and Unsoaked CBR.

Keywords : Pavement Recycling / Cement Stabilisation / Soil Cement / Soil Stabilisation with Cement / Old Asphalt Concrete / Stabilisation of Old Asphalt Concrete