
# Proceedings

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# Road Pavement Preservation Trial with Reacted and Activated Rubber at JORR W2 Toll Road- Indonesia

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*ABSTRACT: This study documents results of a first of its kind crumb rubber modified asphalt trial using reacted and activated rubber in Jakarta, Indonesia. Reacted and activated rubber (RAR) is unique form of modified crumb rubber. Reacted and activated rubber consists of crumb rubber from scrap tire rubber of approximately 30 mesh size or smaller that is chemically altered to create a dry crumb rubber powder that when mixed with hot asphalt instantly creates a rubberized asphalt binder with excellent elastic properties.*

*The trial test section was designed by Consulpav at the request of CONBLOC INFRATECNO a prominent highway paving contractor in Indonesia. CONBLOC INFRATECNO recognized that in many areas of Indonesia pavement failures such as cracking and potholing occur within a few years of construction. Recognition of such pavement failures by CONBLOC INFRATECNO, along with their general knowledge of crumb rubber pavements having the ability to successfully rehabilitate such pavements in other parts of the world, lead them to request Consulpav to design a very thin overlay of a recently failed section of concrete pavement with the goal of providing several years of cracking and potholing free service.*

*Consulpav observed that the three year old concrete pavement was in a cracked and patched condition. It appeared that poor drainage, lack of uniform subgrade support and heavy traffic loading all contributed to the early concrete pavement failures. This condition presented a significant engineering challenge for any type of pavement rehabilitation short of a very thick asphalt overlay (15 cm plus) or complete reconstruction. Based upon Consulpav past experience of designing rehabilitation pavements for similarly distressed pavements in Brazil and China Consulpav recommended that a stress absorbing membrane interlayer (SAMI) using RAR be placed on top of the concrete followed immediately with a 4.5 cm of SMA type mix using RAR. This study documents the design and construction of the test section in March 2017, as well the material properties of reacted and activated rubber binder and SMA type mix.*

*KEYWORDS: rubberized asphalt, SAMI, SMA, overlay of concrete, cracked pavement, reacted and activated rubber*