

## **Abstract**

The sensitivity of fracture-based healing indexes of asphalt mixtures was evaluated using a semicircular bending test following a multiple fracture-rehealing method. Five healing agents (HAs) were applied on the cracks to promote healing. Test results indicated that pre- and postpeak material fracture response properties recovered different values on healing. Prepeak fracture-based indexes such as peak healing index (PI), stiffness healing index (SI), and toughness healing index (TI) were insensitive to postpeak fracture properties, and they showed higher healing values as compared with the fracture energy healing index (EI). Nonetheless, EI, which represented the restored fracture energy on healing, was the most sensitive index to both pre- and postpeak fracture material properties. It could be considered a better index for evaluating the healing performance of asphalt mixtures.