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(54) Title: REJUVENATION OF RECLAIMED ASPHALT

(57) Abstract: Asphalt compositions comprising reclaimed asphalt and a rejuvenating agent are disclosed. The reclaimed asphalt comprises aggregate and an aged binder. The rejuvenating agent, which has a cyclic content of at least 5 wt.%, comprises an ester or ester blend derived from an acid selected from aromatic acids, fatty acids, fatty acid monomers, fatty acid dimers, fatty acid trimers, rosin acids, rosin acid dimers, and mixtures thereof. The rejuvenating agent revitalizes the aged bitumen binder of reclaimed asphalt and restores its physical properties to those of the original performance-grade bitumen. Improvements include desirable softening, low- temperature cracking resistance, better fatigue cracking resistance, good elevated temperature performance, improved miscibil-ity, and restored temperature sensitivity. The rejuvenating agents enable the use of higher levels of recovered asphalt, particularly RAP, in asphalt mixtures, reduce binder and aggregate costs, and help the road construction industry reduce its reliance on virgin, non-renewable materials.

