

Rheological property investigation of various Sasobit-modified bitumen

ABSTRACT

Sasobit has gained interest as an alternative over polymer modification due to its capability of reducing energy requirements for asphaltic mix construction. A study was conducted in order to investigate the effect of different blending speeds on the rheological properties of bitumen at intermediate temperatures. Higher values of revolutions per minute speeds showed an increase in viscosity, softening point temperatures, and complex modulus values. Therefore, it was concluded that the overall stiffness of the tested binders were due to the partial aging of binder. Overall, the service life of pavements will reduce due to the occurred aging.

Keyword: Blending parameters; Blending process; Shear rate; Sasobit; Warm mix asphalt additive; Pavement construction temperatures