Thesis title:

Development of a friction prediction model of asphalt concrete at the construction stage based on Sri Lankan aggregates

Abstract:

In the national context, greater attention has been developed towards road safety as one of the major performance parameters of current road network due to the conjugation of an expressway network system with the prevailing. In European and North American countries, guidelines have been specified to ensure road safety in terms of availability of adequate skid resistance and many other developed countries follow similar course. A parameter called Polished Stone Value (PSV) determines the suitability of aggregates used for the construction of the wearing course, in terms of resistance to wearing and polishing action under trafficking. In Sri Lanka, no such specifications have been extended even in the latest ICTAD specifications for Road and Bridge works and it is high time to incorporate such in the national practice in road construction in terms of PSV. However, in practice, skid-resistance values can only be measured in-situ, and prior to post-construction stages. Therefore, the need for a Skid-Resistance Predictive Model of Sri Lankan roadstones concerns greater importance in terms of road and user safety. The Skid-Resistance Predictive Model is to be developed by a statistical analysis with the laboratory testing data (AIV, ACV, LAAV, Flakiness index, Soundness, MTD, PSV and texture) and field testing data (PSV and texture).