Reclaimed asphalt pavement (RAP) for new pavement construction



India has a very long road network of about 3.93 million km consisting of National highway, State highway, Major district road, other district roads and Village roads. Majority of these roads are with bituminous pavements requiring continuous regular maintenance. In addition to the above, the government has also a very ambitious road development program. All these activities require huge quantities of road construction materials especially stone aggregates. However, the availability of natural resources is limited. This leads to the requirement of looking out for alternative construction materials.

Incidentally, huge quantities of existing bituminous pavement materials are generally milled / removed during resurfacing, rehabilitation and / or reconstruction operations. Once removed and processed, these old pavement materials becomes reclaimed asphalt pavement (RAP) and are available for use in new pavement construction. Very high quality uniform RAP is generally preferred for the production of hot mix asphalt (HMA). RAP that is not suitable for the use in HMA production can be utilised for construction road subbase / base of flexible pavement. However 100 % RAP is also not suitable for construction of subbase / base of flexible pavement. RAP needs to be mixed with virgin aggregates, stabilised with cement or reinforced with polymer geogrid, polymer geocells, bamboo geogrid and bamboo geocells for making it suitable for its use as subbase / base for flexible pavement. The present study is an attempt to use RAP materials without and with reinforcement, as alternative subbase / base materials for flexible pavement construction.