Abstract

Hot Mix Asphalt (HMA) is used predominantly as a paving mix from many decades in road construction. In India almost 90 percent road network is occupied by bituminous pavements only. Certain limitations associated with HMA use are like emission of green house gases from hot mix plant, shut down of plants during rainy season, problems in maintaining the paving temperature when hauling distances are more, etc. Due to topographical constraints, rural
roads projects in North Eastern States of India like Arunachal Pradesh, Assam, Manipur, Meghalaya and others are beyond time. Indian government is undergoing a massive rural road development plan and is highly concerned for the rural road development projects in North East states. Since many of the rural roads of North Eastern States are in hilly regions having heavy rainfall and many a times they have to meet very strict environmental regulations as many of these projects also lies in forest zone. It sometimes becomes very difficult to go with HMA only for rural road construction. Use of cold mixes should be evaluated in these states. Cold mix asphalt consists of unheated aggregate with emulsion or cutback as binder. Cold mix also offers advantages like; reduction in emissions, low fuel consumption, can be used in rainy seasons etc. This paper presents the mix design of cold mixes for use in different courses of pavements. The paper provides information on the different additives which are usually used to increase the performance of cold mix. It also gives the results of same earlier studies on cold mixes. It also highlights the scope of using cold mix in rural road construction in North Eastern states of India.

References

- Doyle, T. "Relating laboratory conditioning temperature to in-situ strength gain for cold mix pavement in Ireland". University College Dublin, Dublin, Ireland.
- Pundhir, N.K.S. "Cold mix technology for road construction". Report by Central road research Institute.
February, p 47-55.

- Ministry of Road Transport and Highways (MoRTH 2001), "Specifications for Road and Bridge Works (Fourth Revision)", Indian Roads Congress, New Delhi, Section 500, Bituminous cold mix, Clause 519.1., pp 227-232.

Index Terms

Computer Science
Emerging Trends in Technology

Keywords
Additives In Cold Mix Cold Mix Design Of Cold Mix And Emulsified Mix