

Ministry of Road Transport & Highways

No. RW/NH-33044/29/2012-S&R(R)

Date:- 04-09-2012

To

1. The Engineer-in-Chief and Chief Engineers of State PWDs and U.Ts.
2. The Chief Engineers of States and U.Ts (dealing with NHs),
3. The Chairman, NHAI, Plot No. G-5&6, Sector – 10, Dwarka, New Delhi.
4. D.G.(Border Roads), SeemaSadakBhavan, Ring Road, Delhi Cantt. New Delhi.

Subject:- New initiatives towards material conservation by use of locally available mineral waste material

Sir,

In order to economize the cost of construction of roads related infrastructure repeated emphasis have been made to use the locally available materials as well as the mineral waste and/or the byproducts /residual products of the industrial activities. A number of research organizations are carrying out laboratory & field investigations and there is a need to further give a boost to such efforts by giving due recognition for the efforts made by them.

It has been brought to the notice of the Ministry of Road Transport & Highways that CRRI have carried out a research study on use of Marble Slurry Dust (MSD) a mineral waste from marble processing industry in road construction. As per their laboratory investigations conducted on Soil-MSD mixes, the study suggests that 20% MSD mixed with soil (on dry weight basis) gave the optimum results. The mixing of MSD with soil needs to be mechanical mixing. The study suggests a saving in total quantity of the natural soil as well as improves the load bearing capacity (CBR value) of mix. However, The quantity of replacement of soil by MSD will depend upon the grain size distribution of locally available soil. Laboratory test on natural soil and mix of soil and MSD shall be conducted to bring out the optimum replacement of soil by MSD. Pulverization of natural soil and technique of mix of MSD with natural soil may be got approved from site Engineer before execution of work.

The mixed material may be used in the sub-grade of the lay-byes and the service road in selected portion of the projects on National Highways/other centrally sponsored projects where such facilities are being provided and in the road embankment of the low traffic volume roads. This material may be used provided the same is easily available within the economical leads.

The adoption of the material is suggested in view of its various advantages of enhanced environment protection. Considering the same, it is suggested that appropriate directions may be issued to the field officers and the project directors for adopting the use of this material. For success in the introduction of this new material, all care and precautions shall be taken for necessary quality control of work.

In case of original works on National Highways in the current annual plan, the State Chief Engineers of the states where this material is available may adopt for road stretches provided the material is available at economical leads. The stretches for use of this material may be identified in consultation with the regional officers of the Ministry.

The project divisions of the Ministry as well as NHAI may consider adopting use of this material by giving appropriate directions to the consultants during the project preparation stages in states where this material is available at economical leads.

They may also issue directions to the concerned field officers to monitor the performance on six monthly basis as mentioned above and forward report on the performance of the same to the Ministry.

Yours faithfully

Arpan Kumar
04-09-12

(Arpan Kumar)

Assistant Executive Engineer

For Director General (Road Development) & Spl Secretary

Copy forwarded to:-

1. All Project C.Es (with a request to identify the projects in a time bound manner where this material can be used.)
2. All R.Os/E.L.Os.
3. All Officers at Hqrs.
4. Secretary General, IRC (with a request that a specification on use of this material may be developed for the Ministry of Road Transport & Highways for which a research scheme is being issued separately.)
5. US (D.1)

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