

D.O. No. NHIII/P/12/82

*Dated the 15th June, 1984*

To

All State Chief Engineers dealing with National Highways (By name)

Sub : Quality Control in Bituminous Construction

It has often been observed during inspection that bituminous works on the National Highways in the States/Union Territories are still being carried out through manual means. With steep increase in price of bitumen, use of bituminous specifications has become very costly and every effort should therefore, be made so that appropriate quality is ensured.

2. Requisite quality cannot be achieved through manual means of construction and these should be avoided at all costs in such works. The control of temperature in bitumen is vital from the point of view of durability. Heating of bitumen is mostly carried out in drums which often leads to overheating with consequent loss in durability. This highlights the need for use of equipments like bitumen boilers.
3. Hand or mechanically operated sprayers with a pump attached to the bitumen boiler will ensure uniform distribution of bitumen on the pavement surface.
4. Manual mixing of bitumen and aggregate continues to be practised extensively. Sometime the mini hot-mix plants, although available with the States, are not used for one reason or the other. It has also been observed that occasionally mini hot-mix plants are used with heating of bitumen in drums only. All these practices are unsound and result in non-uniform and poor quality work. As a result, the bituminous surface gets prematurely disintegrated. In this regard reference is invited to this Ministry's letter No. RW/NHIII/P/12/82 dated

3100/18

the 27th March, 1982 wherein use of Bitumen boilers, mechanical sprayers and gritters etc. on National Highway works had been advocated.

5. In view of the high cost of bituminous specifications and the need for using them as a durable riding surface, it is essential that improvised methods of heating and manual mixing are dispensed with and bitumen boilers and mini hot-mix plants are made use of in heating the bitumen and mixing of material. The weak links in this process of mechanisation should be identified and suitable measures taken to improve the supply of such machinery, build up an infrastructure for smooth operation along with necessary training of personnel. All these issues were also discussed with you during the review of works held in May this year.

6. If suitable action on the above lines are not taken, a situation may arise when this Ministry may be compelled to suspend the sanction/execution of works, till the State PWD is fully equipped for the purpose.

7. Action taken in this matter may please be reported to this office.