



Figure 3. After Cold mix Application

b. Microsurfacing

During the quarter, Hincol took up the challenge of treating SATIS Bridge under Thane Municipal Corporation. The traffic load and surface shearing is very high on this bridge due to nonstop movement of buses. Microsurfacing treatment was done successfully on the DBM treated surface.



We look forward to enhanced contribution from our customers to further enrich this newsletter. We also welcome suggestions, recommendations and critics that will help us serve you better. You may send your feedback and contributions to us at: customerconnect@hincol.com or visit www.hincol.com

Alternatively, you may also post us information at:

HINCOL
Better Roads, Better Life
Hindustan Colas Limited

JUST ONE PASS MAKES THE ROAD FIRST-CLASS.
Uniform finish. Skid resistant. Long lasting.

HINCOL's Micro surfacing process is a highly effective, cold applied low carbon alternative compared to conventional surfacing treatments. The uniqueness of this process is that it offers the use of a range of versatile materials, depending on the clients' specifications, with unique engineering and application benefits. Micro surfacing can be utilised on Carriageways, Airfields and Car Parks depending on the materials specified.

HINCOL Micro surfacing offers:

- The ability to fill ruts and deformations in a single pass
- Technology to reduce the effect of reflective cracking
- Reduced pavement deterioration
- Enhanced pavement durability
- The technology to seal the cracks effectively
- High texture finish and quality
- Greater strength and durability
- An ideal solution for maintenance of high traffic volumes and speeds
- Reduced energy consumption and carbon emissions
- Reduced noise characteristics
- Uniform finish
- Improved pavement aesthetics
- Superior skid resistance

HINCOL provide end to end services on Microsurfacing. Right from pavement selection, pre treatment of pavement surfaces, identifying suitable aggregates, customising modified bitumen emulsion, designing microsurfacing mix at state of the art laboratory to execution of microsurfacing layers with sophisticated machineries and skilled crew, HINCOL has set superior standards for execution of Microsurfacing technology. Within a short span of time, HINCOL successfully executed many Microsurfacing projects across India.

For further information, refer our website

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Simple and fast, it'll also long-last.
Repairs potholes permanently and economically too.

ROAD BOND

EFFICIENT AND PERMANENT REPAIR OF POTHOLES

Roadbond, an instant repair pre-mix is the permanent repair solution for potholes and utility cuts. The all-weather product is quick setting with minimal traffic disturbance.

It is ready for immediate use and requires no heating, mixing or additions to the product before or after application. Its special additives impart unique performance properties to the mixture. What's more, the treated surface can be opened to traffic immediately after application!

The efficient and economical Roadbond is ideal for: Potholes and Utility Cuts
The aggregate gradation follows Table 500-47 of Specifications for Road and Bridge Works, Fifth Revision, 2013, Ministry of Road Transport & Highways

Efficient and economical for repairing

Pot holes	Utility cuts	Patch works	Application
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Advantages:

- Instant setting, fast development of strength and least interference with traffic
- Resistance to deformation, chalking and cracking
- Bonds well to cool, damp surfaces
- Resistance to stripping by water
- Resistance to peel off under traffic
- No heating required
- Consistent Mix Quality
- Low temperature cure
- Ease in application
- Environment friendly
- Stable Patches
- Economical

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CUSTOMER CONNECT

Quarterly News Letter Issue No. 19 / July - September 2014

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“CUSTOMER CONNECT”

“CUSTOMER CONNECT”, The Quarterly Newsletter of Hindustan Colas Ltd, aims at strengthening exchange of information and experience sharing amongst its customers. The success of this communiqué is largely dependent on feedback and information inflow from our customers and we thank them for their continued support.



Cold Recycling

With the significant increase in the cost of pavement materials and a growing shortage of good aggregates in some parts of the country, recycling of pavements became a cost effective alternative to be considered when rehabilitating a pavement structure.

Bituminous pavement recycling involves reusing the bitumen concrete pavement material to rehabilitate and/or strengthen the pavement structure. The cold mix recycling process involves first breaking up and pulverizing the pavement in-place or removing the recyclable asphalt pavement (RAP) to a central plant for crushing. Second, the RAP material is modified by the addition of emulsified bitumen, water and / or aggregate as required. The RAP material is then placed and compacted to the specified density.

Cold Mix recycling allows the reuse of existing materials resulting in the conservation of existing resources. The resources conserved include aggregates, fuels from reduced transportation processing requirements (no heating of materials required).

Cold mix recycling should be considered when a pavement has deteriorated to a point where its use is more economical than a conventional overlay. The effective useful life of cold mix recycled bituminous pavements and those reconstructed with new materials should be almost equal and cost savings encountered have ranged from 10 – 30%.

The specifications and design of cold plant mix recycling of bitumen pavements are referred to in ASTM D4215. Cold plant mixtures can be dense-graded or open-graded. Cold-laid bituminous mixes may be used for surface, base, or subbase courses.

HINCOL Value Proposition:

HINCOL believes Cold Recycling solutions are ideal suited to address numerous constraints agencies faces and has expanded its service portfolio with

a. Cold Recycling Mix Design Services



b. Cold Recycling Application Support Services

These initiatives are aimed at helping our valued customers to fetch benefits of these systems effectively

Field Experiences

a. Cold Mix

Rural roads are the tertiary road system in total road network which provides accessibility for the rural habitations to market and other facility centres. In India, during the last five decades, rural roads are being planned and programmed in the context of overall rural development, and tried to provide all weather connectivity with some level of achievement. Hincol has developed cold mix technologies for different specifications such as Bituminous Macadam (BM), Semi Dense Bituminous Concrete (SDBC), Mix Seal Surfacing (MSS), and Premix Carpet (PMC). HINCOL has wide experience in the construction of roads using emulsion based cold mix technologies in wet and inclement weather. These cold mixes can be produced either by using concrete

mixer or in hot mix plant without heating facility. The paver and other construction machineries, as in normally employed for hot mixes, can be used for execution of these works.

HINCOL joined hands with **Central Road Research Institute** with the objective of developing cold mix technology for structural layers such as Bituminous Macadam (BM) and Premix Carpeting (PMC) as base course and semi dense bituminous concrete (SDBC) and Mixed Seal Surfacing (MSS) as wearing course. The demonstrations were carried out in three different climatic conditions – desert regions of Rajasthan (RAGJ Road (Kajuwala – Dantore), snowfall regions of Srinagar and heavy rainfall regions of Mizoram

During the quarter, HINCOL successfully undertook execution of Cold Mix technology for Uttarakhand PWD in the month of Apr 2014. The location was Mayali Guptakshi road. The overlay laid was 20mm Premix Carpet followed by seal coat using customized bitumen emulsion. The required quantity of cold mix was produced in concrete mixer and laid manually. Compaction carried out with steel roller.



Figure 2. Cold Mix being laid

HINCOL also successfully undertook execution of Cold Mix technology for Madhyapradesh Rural Road Development Authority (MPRRDA) in the month of Jun 2014. The stretch was Singhpur (Niwas) to Khudrisamiya PMGS-Road, Mandla District.

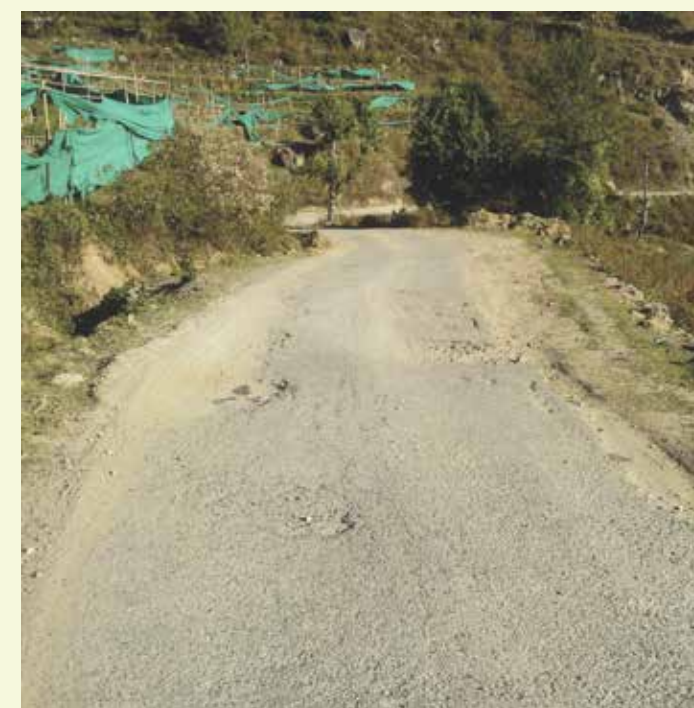


Figure 1. Before Treatment

