CC-resilient Road Building Technology in Himalaya

NMHS-Project PI:

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Eco-Friendly Road Building Technology for the Himalayan Regions

- Laboratory mix design with emulsion and different type of filler contents (as per climatic condition)
- Mobile Cold Mixer-cum-Paver (MCMP) technology developed
- Patent filed and technology transferred & trademark
- 1000-m road constructed (Jhimar, Uttarakhand)
- Policy document of Know how prepared and transferred to BRO, NRIDA



Machine Prototype

Technology Specifications

| Engine Power: | 70kW | |
|------------------------------|--|--|
| Emulsion Tank Capacity: | 1000 Litres | |
| Water Tank Capacity: | 1000 Litres | |
| Additives Tank Capacity | 100 Litres | |
| Fillers Tank Capacity: | 200 kg | |
| Discharge Capacity of Mixer: | ≤700 kg/min | |
| Paving Width: | $1.75 \sim 2.25$ m (manually adjustable) | |
| Overall Dimensions: | 5.5m×2.2m×2.4m (L×W×H) | |
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Green Road Pavements

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Emulsion Aggregate (Liquid form at ambient temperature)





Cold Mix

Field Application







| Parameters | Conventional Process | Mechanized Process |
|------------------------------|-----------------------------|--------------------|
| Total No. of Labors involved | 15 | 7 |
| Total stretch made in a day | 200 m | 1200 m |
| Fuel consumption per day | 8 Liters | 6 Liters |



Mechanized Construction Process, using the developed Machine Prototype