FONSECA/McELROY GRINDING CO., INC.

Cold In-Place Recycling (CIR)

What is Cold In-Place Recycling (CIR)?

Cold In-Place Recycling (CIR) is a revolutionary roadway reconstruction method which will forever change the process of repaving roads. CIR saves energy, decreases greenhouse gas emissions, and conserves materials, all while reducing the costs and time of the project.

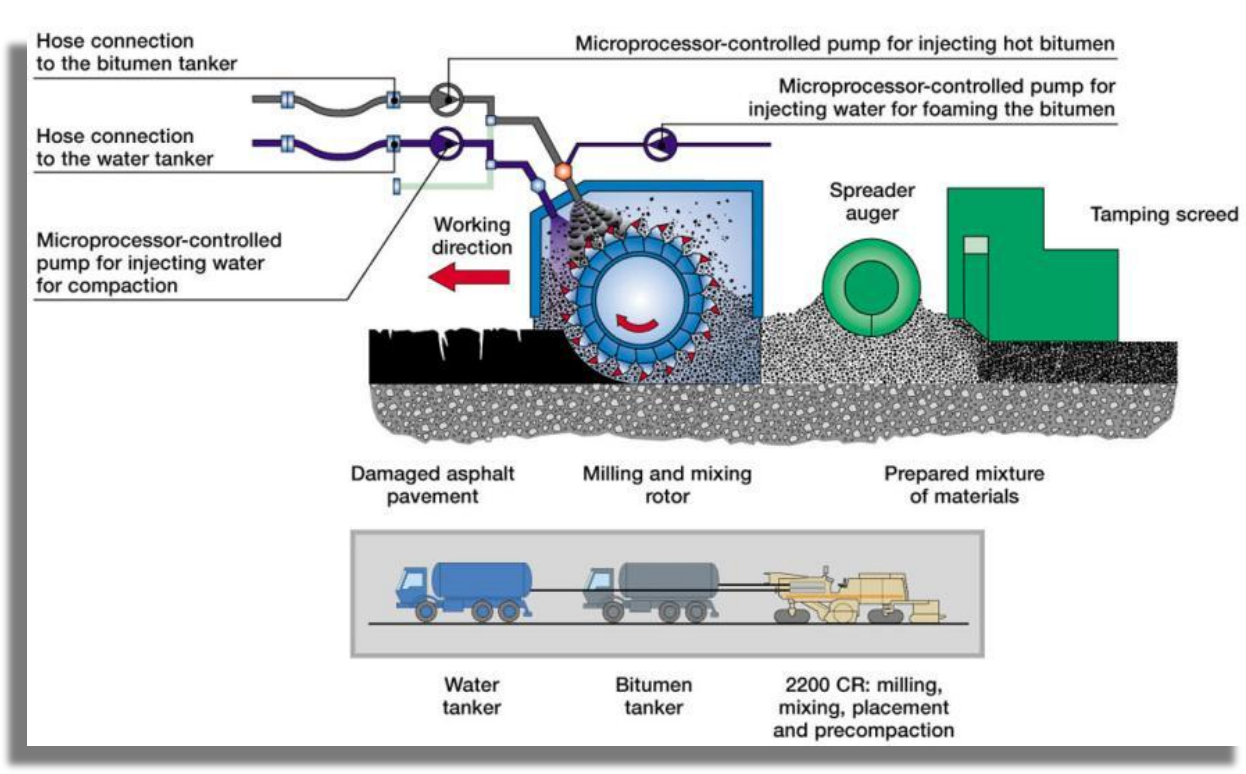
What is the purpose of CIR?

- Rework HMA to depth of 3-6 inches
- Correct surface cracks, thermal distress, and oxidized asphalt pavement
- Ride quality

How does CIR work?

Cold recycling is a multi-faceted process that can satisfy several needs in the maintenance and rehabilitation of roads infrastructure. The machine is specifically designed to have the capability of recycling thick pavement layers in a single pass.

- Machines grind and resurface three to six inches of the pavement to recycle old material.
- The grindings are then mixed with foamed asphalt that binds it together. It's windrowed out the back and placed with a tamping screed, ready to handle traffic in as little as 90 minutes.
- Wearing course is then added to the top.



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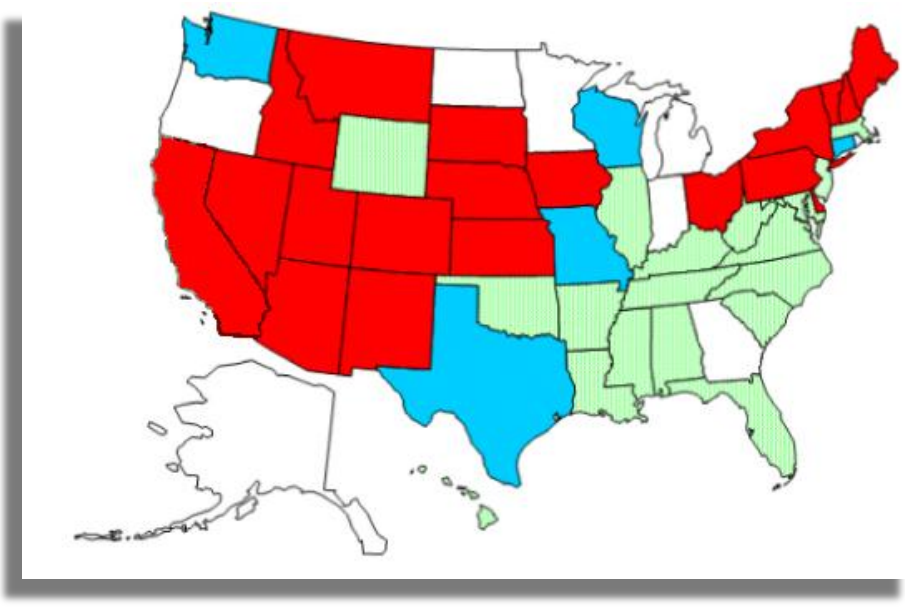
Cold Recycling Facts



States Use of CIR

- Red – Use 4+ projects
- Blue – Low use – limited
- Green – No Use
- White – No Response

Benefits of Cold Recycling

- *Environmental Factors*: Full use is made of the material in the existing pavement. Spoil sites do not have to be found and the volume of new material that has to be imported from quarries is minimized. Haulage is drastically reduced. The overall energy consumption is thus significantly reduced, as is the damaging effect of haulage vehicles on the road network.
- *Quality of Recycled Layer*: Consistent, high quality mixing of the in-situ materials with water and stabilizing agents is achieved. The addition of fluids is accurate due to micro-processor controlled pumping systems. The recycled material and additives are rigorously mixed together in the mixing chamber.

- *Structural Integrity*: The cold recycling process produces a layer that is homogenous and does not contain weak vertical interfaces between existing pavement when using the base repair method.
- *Shorter Construction Time*: The Wirtgen Cold Recycler is capable of high production rates that significantly reduce construction times compared to alternative rehabilitation methods. Shorter construction times reduce project costs, as well as providing a largely intangible benefit for the road user in the reduced time that traffic is disrupted.
- *Safety*: One of the most important benefits of this process is the high level of traffic safety that can be achieved. The full recycling train can be accommodated within the width of one traffic lane.
- *Cost Effectiveness*: The above benefits combined generate 20-40% cost savings, which makes cold recycling a most attractive process for pavement rehabilitation in terms of cost effectiveness.

Before and After CIR

PROJECT EXAMPLES
Holsclaw Road, Gilroy (L)
Monterey Rd., San Jose (R)