

Cold Recycling – a method of road construction with low CO₂

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Conventional road construction



Transport



Crushing



Excavating





Loading



Transport



Asphalt plant



Cold Recycling in situ



Binding Agent



Cold Recycling in situ Foamed Bitumen



The larger surface area allows the mixing of bitumen with cold and damp aggregate



WR 4200 + WM 1000 Cold Recycling of a main traffic road



High performance recycling by using cement suspension and foam bitumen



Cold recycler WR 4200 A cold recycler with twin shaft pugmill mixer









WR 4200 Cold Recycling Highway I 80 in California



Recycling by using the WR4200 cement suspension and foam bitumen



Steps of conventional structural rehabilitation





CO₂ - Emission conventional





WR 4200 Cold Recycling Highway I 80 in California

Konventionelles Verfahren



Asphaltfertiger



Lkw



Radlader





Misch- Kaltfräse

Lkw





▶





Modernes Kaltrecycling



Kaltrecycler WR 4200



Steps of cold recycling





CO₂ - Emission Cold Recycling





Material comparison for 75.000 m²

	Conventional	Cold recycling
Milled Asphalt	42.900 t	6.600 t -85%
Bitumen	1.855 t	1.337 t -28%
Additional material	42.900 t	10.725 t -75%
Transport (18 t LKW) (35 km round trip)	166.833 Km	25.667 Km -85%





WR 4200 **Production of a CTB in cold recycling method**

Milling and paving of the material up to the guide rail

WR 4200 **Production of a CTB in cold recycling method**

Paving with the Voegele screed "AB 500 TV"

WR 4200 **Production of a CTB in cold recycling method**

Uppermost accuracy during paving

WR 4200 Coldrecycling – B52 in Germany

Coldreycling train in operation, B52 near Trier

WR 4200 Coldrecycling – B52 in Germany

Cold mixture leaves the WR 4200 pre-compacted and pre-paved

Recycling of a highway in USA

Paving screed equipped with ultra sonic levelling sensor

Milling and paving of the material up to the guide rail

Closed surface after compaction

Road lanes without any further overlay released for traffic

Main advantages of the cold recycling in situ

- Very efficiency in comparison with conventional methods
- Protection of resources e.g. additives and binding agents
- Considerable reduction of CO₂ emission
- Reduction of transport volume
- Less exposure of the excisting road network
- Reduction of dumpsite volume
- Fast construction progess shorter construction time, less obstruction of traffic

According to the waste act the recycling is definitely prioritise compared to the disposal