

StarTribune

Tests of new mixtures, technology may cure potholes

April 13, 2013 - 9:18 PM

University of Minnesota Duluth researchers think they may have found the perfect recipe for filling potholes: a mixture of old shingles, taconite tailings and old asphalt heated by a portable microwave.

UMD's Natural Resources Research Institute is teaming with a Monticello firm to test the product, which bonds to pavement even in cold weather, said Larry Zanko, senior research fellow at the NRRI.

The mixture, when heated, softens and can absorb electromagnetic waves produced by a microwave oven, he said.

The goal, Zanko said, "is to find solutions that will last for a season, so crews don't have to go back two and three times. We think it is quite promising."

Microwave Utilities Inc. has devised a 50,000-watt microwave mounted onto a truck that can heat frozen ground to up to 280 degrees. It also extracts moisture from the pavement, a key ingredient in pothole formation, said firm spokesman Kirk Kjellberg.

Field tests on Hwy. 53 and Grand Avenue in Duluth have yielded positive results, and have drawn attention from the Minnesota Department of Transportation. The agency along with the Center for Transportation Studies at the Twin Cities campus of the University of Minnesota provided \$40,000 in grants for study and testing.

TIM HARLOW