



SEAM TO BE BURNED—Project officials discuss the operation in an entry driven into coal seam in the present experiment.

ENGINEERING

Recommend Cinders on Ice

► CINDERS are better than sand to aid automobile traffic on icy roads, the Highway Research Board of the National Research Council in Washington indicates in a bulletin. Cinders are sharper than sand and cling to tires and cut into ice better than sand particles, it says.

The melting or embedding action of cinders with their greater porosity is better than sand because of the larger quantity of moisture and chloride held at or near the surface of the cinder particles, the report continues. Due to their dark color cinders absorb more heat than sand when the sun is shining, which results in greater embedment.

The title of the bulletin is **RECOMMENDED PRACTICE FOR SNOW REMOVAL AND TREATMENT OF ICY PAVEMENTS**. It was prepared particularly for public officials whose duties include keeping highways and streets clear for winter travel. It presents recommendations for organizing the road-clearing program, drift control, markers for drainage and structures, use of weather reports, night patrols, types of equipment, and aids to traffic such as abrasives and the chemicals.

Abrasives, whether cinders, sand or washed rock screenings, should be chemically treated with common salt or calcium chloride when put in storage to be available for winter use. Such treated abrasives become anchored to the ice or packed snow

and do not blow away as easily as untreated materials. Either of these chlorides, when completely dissolved and uniformly mixed with the abrasive, prevents freezing and the abrasive is ready to handle in extremely cold weather.

Stockpiles of cinders, sand or other materials, placed along highways for ready use when needed, should be protected by some type of covering from wet weather. Otherwise, there is danger of their freezing. While the treatment with chloride prevents freezing for a period, the chemicals will leach out in time if not in watertight storage.

Dry chloride can be applied directly to the road surface. This is done mostly on city streets where heavy traffic compacts the snow before it can be removed. An application of from 300 to 500 pounds per mile of two-way highway, spread for about two feet along the center line, is usually sufficient. On portland cement concrete, these salts should be used sparingly, because they may cause surface pitting in the paving.

Science News Letter, January 15, 1949

Automobiles of today may look bigger than prewar types but few actually are; they have more interior room, without significant change in over-all dimensions, by moving engines forward and widening bodies to cover former fender space.

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