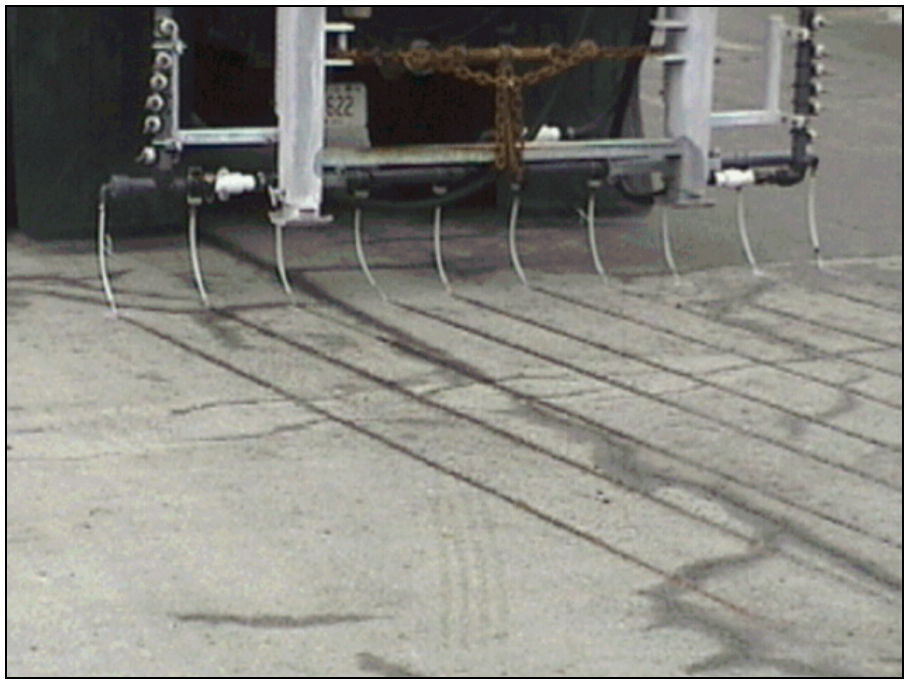


C. Pre-wetting Solids

1. **The effectiveness and efficiency of solid chemicals** can increase when the material is pre-wetted.

    a. The chemical then sticks to the road better and becomes activated by the moisture.

2. **Solid chemicals can be pre-wet three ways:**

    a. Pre-wetting the stockpile

        i. Pre-wet a load of solids just before placing the load in the truck by spraying and mixing the stockpile.

    b. Pre-wetting of a single load

        i. Pre-wet a load of solids by wetting the load as it is being loaded by:

            a) spraying a bucket load of dry material as it is being loaded,

            b) parking the load beneath a sprayer mechanism, and

            c) some other similar means.

c. Pre-wetting by on-board spreader spray systems

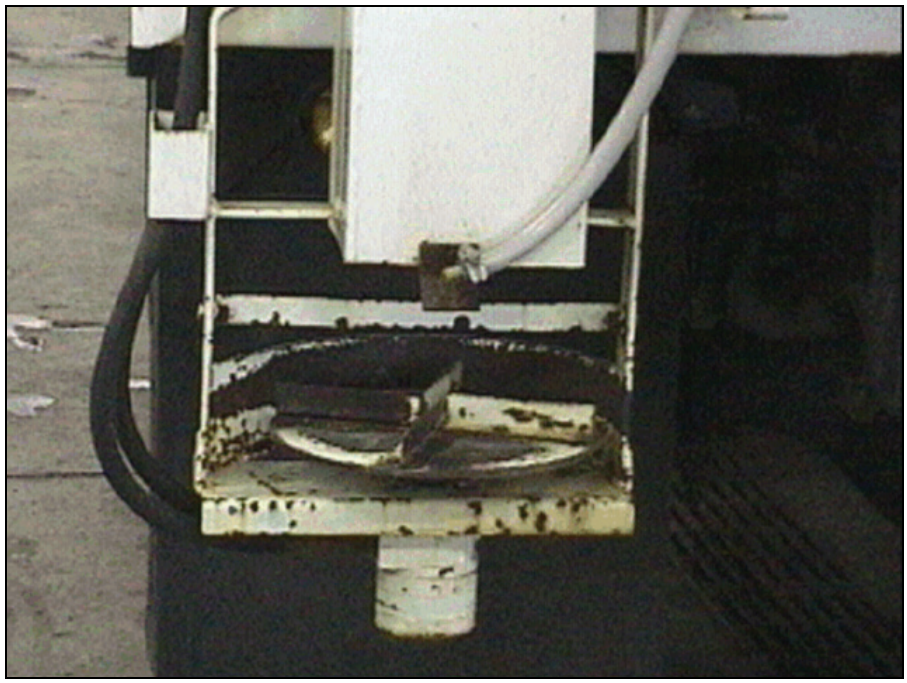
i. This technique involves applying liquid to the solid material as it is being spread onto the roadway.

ii. Pre-wetting can be accomplished by:

a) equipment that is an integral part of the spreader system or

b) equipment added to an existing dry material spreader.

iii. Pre-wetting of the material can take place either at the spinner or dry material feed mechanism.



3. Spreading pre-wetted material

a. Ground speed controls should be used to adjust the material flow rate in relation to vehicle speed.

i. As speed increases the flow of material automatically increases to maintain a constant application rate. The same is true as the speed decreases: material flow decreases to keep pace.

ii. In this manner, material is neither wasted nor under-applied.

b. Combination Systems

i. Systems are now available that provide the benefits of both direct applicators and pre-wetting solids combined in one unit. These systems may be used for either type of application.

D. Solid Material Application

1. Advances

a. For decades, salt was spread onto roadways by shoveling it onto the road from the bed of a slow moving truck. Fortunately today we have much more efficient (and easier!) application techniques for solid materials.

2. Spreader Types - dry chemicals are generally applied with:

a. Hopper spreaders