Understanding Re-Freeze and Its Impact on the Plow Industry

A **re-freeze** occurs when melting snow or ice refreezes due to falling temperatures, usually overnight or after a brief warm-up. During the day, sunlight or salt treatments can melt surface snow and ice, leaving behind slush or water. However, when temperatures drop below freezing again—especially after sunset—that moisture can quickly re-freeze into dangerous black ice or hardened layers of ice, which are often more hazardous than the original snowfall.

Re-freezing presents a unique challenge for the **plow and de-icing industry**. Unlike fresh snow, which can be plowed relatively easily, refrozen layers bond more strongly to the pavement and are harder to remove. This forces plow companies to use additional treatments such as rock salt, calcium chloride, or pre-wetted brine to re-melt these hardened surfaces. The labor and material costs increase, and companies often have to revisit sites multiple times to ensure safety, especially for commercial properties or high-traffic areas.

Timing is crucial. If crews don't return in time to treat surfaces before the re-freeze occurs, they risk customer complaints and liability issues from slips, falls, or vehicle accidents. This is particularly problematic during rapid temperature drops or when warm daytime highs mask the threat of evening icing. Plow companies must closely monitor weather forecasts, pavement temps, and moisture levels to anticipate and respond proactively to re-freeze events.

Ultimately, re-freezes **extend the length and intensity of winter operations**. They increase material usage, strain manpower, and complicate scheduling—turning what would be a one-time event into a two- or three-phase service. For that reason, understanding the conditions that lead to a re-freeze and communicating with clients about its risks is essential for any snow and ice management business.