Analysis on Mass loss of different sized projectiles penetrating into concrete targets

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Highlights

- Dynamic resistance acting on projectile nose strongly depends on the diameter of projectile.
- The friction coefficient between projectile and concrete is described quantitatively by hardness and strength of target and projectile materials.
- Larger projectiles suffer much less relative mass loss than smaller projectiles at the same velocity.
- The model can effectively predict mass loss and nose shape change of different sized projectiles with initial impact velocity below 1500m/s.