Module 7: Particle Removal Characteristics

- State two reasons why a liquid spray removes particles more effectively from a surface than an air blow-off. Identify an effective method for removing submicron particles from a surface, and describe the mechanism(s) involved.
- When high-pressure fluid jets are used to remove particles from surfaces, identify and write an expression for the prevailing particle-removal mechanism. Why are liquid jets 50-100 times more effective than air jets in this application?
- In removal of particles by pressurized fluid spray, what role does fluid viscosity play in determining the removal force, and removal efficiency for fine particles?
- When attempting to remove submicron sized particles from a surface using an acoustic field, would higher frequency be more effective or higher amplitude? Justify your answer with mechanistic reasoning.