

### Ultrasonic spray coating of dispersed particle type solution

김기영\*, 강창현, 이성일  
한국생산기술연구원  
(kykim@kitech.re.kr\*)

The ultrasonic nozzle is more eco-friendly than the normal pressure nozzle because of easy control of sprayed volume and less usage of solvent per unit area. In this study, the coating solution including dispersed SiO<sub>2</sub> particles that is characteristic of Anti-reflection(AR) was sprayed with a ultrasonic nozzle system. The coating solution was composed of SiO<sub>2</sub>, polyacrylate, UV initiator and a solvent. To compare with the coating properties, ultrasonic spray coating and bar coating were respectively carried out with same coating solution. The mixed solution composed of MIBK, PGMEA, and TBA was applied to dilute the coating solution and the solid content of the solution was 4%. The film made by bar coating was characteristic of AR but the film made by spray coating did not show such property. It has been found that the film made by spray coating has ununiform surface thickness. Accordingly, it is considered that the solution is required to uniform the film thickness.