Verifying backgrind tape lamination pressure uniformity

Semiconductor Production

The process for laminating backgrind tape (protective film) precedes grinding. If the lamination roller pressure distribution is not uniform, the backgrind tape can become wrinkled. If the height of the wafer and the surrounding mounting table are not optimal, wafer cracking and poor backgrind tape lamination occurs. Previously, only trial and error adjustment methods had been available to prevent this.

Product used: Prescale (Extreme low pressure 4LW)

Prescale is placed on the wafer and the surrounding mounting table, after which the lamination roller is operated at the usual pressure. The Prescale is then removed and its color is examined to determine whether pressure had been uniformly applied.
The ability to verify pressure uniformity in advance reduces losses resulting from poor quality. Wafer cracking is eliminated.

Time Savings
Substantial improvements in equipment adjustment work efficiency.

Quality improvement
The ability to verify pressure uniformity in advance reduces losses resulting from poor quality. Wafer cracking is eliminated.

Without using Prescale
Wrinkles may cause loss of backgrind tape, and wafer cracking may occur if the height adjustment of the wafer and the surrounding mounting table area is poor. The recovery process requires trial and error adjustments using actual lamination results. Tape, wafer and other losses occur, and time is required for adjustments, etc.

Using Prescale
Using Prescale, it is possible to verify the amount of pressure applied to the silicon wafer by the lamination roller under actual usage conditions. Only Prescale can show the pressure distribution under such conditions. Furthermore, the ability to periodically check the uniformity of pressure results in adjustment time and material loss savings.