

**1994****One-bath wafer cleaning system****~ Discrete Semiconductor/Others ~**

Wafers were dipped in multiple chemical solutions to remove impurities and particles in batch wafer cleaning process in semiconductor manufacturing. Conventional cleaning was a multiple-bath system in which processing baths containing various chemical solutions were lined up and baskets holding wafers were dipped in them one after another. DAINIPPON SCREEN MFG. (later SCREEN Holdings) introduced the FS-820L, a one-bath cleaning system that treated a series of cleaning processes by replacing chemicals and pure water for rinse in single bath in 1994. It became possible to achieve a high level of cleaning because the wafers were no longer exposed to the atmosphere between each chemical treatment process. At the same time, the cleaning system became significantly compact and energy efficient. A low pressure drying after washing became possible in 1995.

The one-bath cleaning system for 300 mm wafers (FC-3000) was released in 2001, becoming the main equipment of 300 mm batch cleaning system. Throughput was greatly improved by replacing deionized water rinse with deionized water shower washing during replacing chemical solutions.

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