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(54) CLEANING OF SEMICONDUCTOR WAFER

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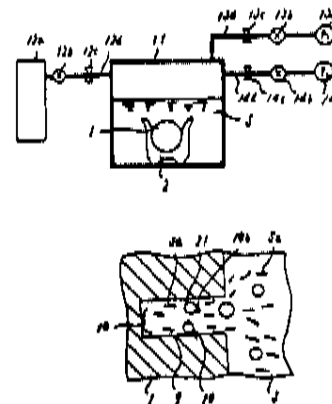

PURPOSE: To surely remove a fine particle and a residual chemical liquid which have adhered to a trench hole by a method wherein a gas or a medium solution whose boiling point is lower than that of a cleaning liquid is added, a pressure inside a tank is pressurized within a specific range, the gas or the medium solution is dissolved in the cleaning liquid and the pressure inside the tank is reduced.

CONSTITUTION: In a state that a wafer 1 is immersed in a cleaning liquid 5, a gas or a medium solution whose boiling point is lower than that of the cleaning liquid 5 is added from the outside of a cleaning tank; the inside of the cleaning tank 11 is pressurized within a range of 1 to 10kg/cm². The gas or the medium solution is dissolved sufficiently inside the cleaning liquid 5; after that, a pressure inside the cleaning tank 11 is reduced within a range of 1 to 10kg/cm² to 200 to 1 to 200 Torr. As a result, molecules of the gas or the medium solution which has been dissolved in the cleaning liquid 5 at the inside and the outside of a trench hole 9 are expanded by a pressure difference and are moved upward as air bubbles 21. Consequently, the cleaning liquid 5 inside the trench hole 9 is moved actively to the outside of the trench hole 9; at the same time, the cleaning liquid 5 outside the trench hole 9 seeps into the trench hole 9 by a volume portion of the air bubbles 21 expelled to the outside of the trench hole 9; a so-called convection current is generated. Thereby, it is possible to expel a fine particle and a residual chemical liquid which have adhered to the trench hole 9 to the outside of the trench hole.