

ABSTRACT OF THE DISCLOSURE

A cleaning method of a substrate for a mask blank includes a step 1 of supporting the substrate so that a surface to be cleaned of the substrate directs upward and is horizontal; a step 2 of rotating the substrate around a rotation axis that is perpendicular to the surface after the step 1; a step 3 of supplying a cleaning liquid to the surface after the step 1; a step 4 of bringing an ultrasonic cleaning member into proximity of the surface to satisfy formula,

$$\frac{n\lambda}{2} - \frac{\lambda}{5} < D < \frac{n\lambda}{2} + \frac{\lambda}{5}$$

where D is a distance between the surface and a vibration surface provided at an edge of the ultrasonic cleaning member, n is an integer, and λ is a wavelength of an ultrasonic wave, after the step 1; and a step 5 of ultrasonically cleaning the surface by applying ultrasonic waves to the cleaning liquid after the steps 1 to 4.

Fig. 6