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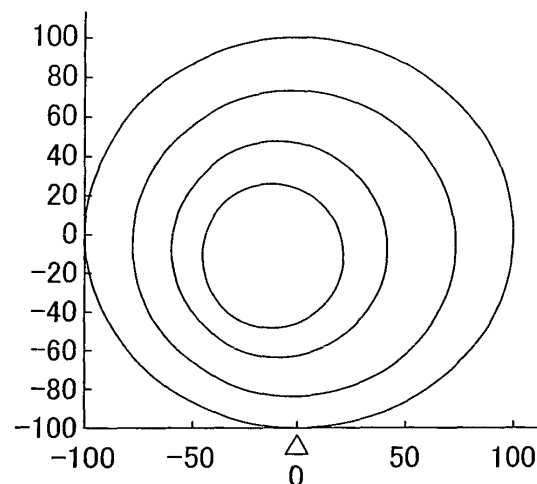
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(54) **In-plane distribution data compression method, in-plane distribution measurement method, in-plane distribution optimization method, process apparatus control method, and process control method**

(57) After a process is performed on a substrate, the in-plane distribution over the substrate is measured. Measured data of the in-plane distribution which is obtained by the measurement is stored. A model formula of the in-plane distribution is calculated from the stored measured data. The measured data is compared with the model formula. A set of parameters of the model formula is calculated, and the calculated parameters are stored as data of the in-plane distribution over the substrate. The measured data includes measurement coordinates over the substrate. The model formula is obtained by modeling the tendency that the in-plane distribution concentrically varies and the tendency that the in-plane distribution varies along a diameter direction.

FIG. 1A



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