no noise) is the latest amount of change in the spectrum obtained immediately before the amount of change in the spectrum satisfying the exclusion condition is obtained.

With respect to the above (II), the plurality of amounts of change in the spectrum already obtained during polishing of the workpiece W are a plurality of amounts of change in the spectrum that do not satisfy the exclusion condition (i.e., contain no noise). In one embodiment, the plurality of amounts of change in the spectrum already obtained during polishing of the workpiece W are latest M amounts of change in the spectrum that do not include the current amount of change in the spectrum. The number M is a preset value.

With respect to the above (III), the adjacent measurement points on the workpiece W are a plurality of measurement points adjacent to a measurement point on the workpiece W at which the amount of change in the spectrum satisfying the exclusion condition has been obtained. As described above, each time the polishing table 103 makes one rotation, the optical sensor head 107 directs the light to the plurality of measurement points on the workpiece W while moving across the workpiece W, and receives the reflected light from the plurality of measurement points. The adjacent measurement points on the workpiece W may be, for example, a plurality of measurement points located at both sides of the measurement point at which the amount of change in the spectrum satisfying the exclusion condition (i.e., containing the noise) has been obtained. The amounts of change in the spectrum obtained at the adjacent measurement points, respectively, are amounts of change in the spectrum that do not satisfy the exclusion condition (i.e., contain no noise).

With respect to the above (IV), the approximate expression is an expression on a coordinate system having coordinate axes representing the amount of change in the spectrum and the polishing time, as shown in FIG. 20. The approximate expression has the polishing time as a variable. The approximate expression is determined from a plurality of data points on the coordinate system specified by a plurality of amounts of change in the spectrum that do not satisfy the exclusion condition (i.e., contain no noise) and the corresponding polishing times. The approximate expression may be represented by a polynomial. The way of determining the approximate expression is not particularly limited.