WHAT IS CLAIMED IS:

1. A laser processing apparatus comprising:

a chuck table having a holding surface configured to hold a workpiece;

a laser beam irradiating unit having a condenser configured to condense and apply a laser beam to the workpiece held on the chuck table;

a moving unit configured to move the chuck table and a condensing point of the laser beam relative to each other;

a measuring unit configured to measure a beam profile of the laser beam; and

a control unit configured to control each of the units,

the measuring unit being disposed adjacent to the chuck table so as to have a light receiving surface parallel with the holding surface of the chuck table, and

the measuring unit comprises:

a microscope configured to magnify the laser beam condensed by the condenser;

an attenuating optical system configured to attenuate an intensity of the laser beam magnified by the microscope; and

an imaging element configured to image the laser

beam magnified by the microscope and attenuated by the attenuating optical system,

wherein the measuring unit measures a beam profile of the laser beam at a position at which the laser beam is diverged and parallel with a Z-axis direction, after passing through the condensing point of the laser beam.

2. The laser processing apparatus according to claim 1, wherein

the control unit includes

a storage section configured to store a position of the laser beam applied to the light receiving surface,

a comparing section configured to compare the position of the laser beam, the position being stored in the storage section, with a position of the laser beam measured in predetermined timing, and

a notifying section configured to notify a warning when the position of the laser beam, the position being compared by the comparing section, is changed by a predetermined value or more.

3. The laser processing apparatus according to claim 1, further comprising:

a Z-axis direction moving unit configured to move the measuring unit in a Z-axis direction as a direction

perpendicular to the light receiving surface.

4. The laser processing apparatus according to claim 1, wherein

the measuring unit is located at a retreat position at which a surface on which the laser beam is incident is located below an upper surface of the chuck table during non-measurement, and

the measuring unit is located at a measurement position at which the surface on which the laser beam is incident is located above the upper surface of the chuck table during measurement.

5. The laser processing apparatus according to claim 1, wherein

the attenuating optical system comprises a neutral density filter that decreases an amount of light by a certain amount, and transmits the light without selecting a wavelength in a predetermined wavelength range.

6. The laser processing apparatus according to claim 1, wherein

the attenuating optical system comprises a plurality of prisms provided to reflect a part of the laser beam.

7. The laser processing apparatus according to claim 1, wherein

the imaging element comprises a wave front sensor configured to measure a wave front of the laser beam.

8. The laser processing apparatus according to any of the preceding claims, wherein

the moving unit comprises an X-axis direction moving unit; and

the measuring unit is supported by an X-axis direction moving plate of the X-axis direction moving unit.