WHAT IS CLAIMED IS:

1. An imprint apparatus which transfers, by using a mold having a pattern region in which a pattern is formed, the pattern to an imprint material on a substrate, the apparatus comprising:

a deformation unit configured to deform the pattern region into a convex shape protruding toward the substrate; and

a control unit configured to control a process of deforming the pattern region by the deformation unit and bringing the mold and the imprint material on the substrate into contact with each other,

wherein the control unit

obtains information indicating a relationship between a relative tilt between the mold and the substrate before starting contact between the mold and the imprint material on the substrate, and a moment which fluctuates the relative tilt by starting contact between the mold and the imprint material on the substrate,

determines, based on the information, a target relative tilt between the mold and the substrate such that a moment to be generated by starting contact between the mold and the imprint material on the substrate falls within an allowable range, and

starts contact between the mold and the imprint material on the substrate after setting the

relative tilt between the mold and the substrate to the target relative tilt.

2. The imprint apparatus according to claim 1, further comprising storage means configured to store the information,

wherein the control unit stores, in the storage means, the information generated in advance, and determines the target relative tilt based on the information obtained from the storage means.

3. The imprint apparatus according to claim 1 or 2, wherein

the substrate includes a plurality of shot regions, and

the control unit determines, based on the information, the target relative tilt between the mold and the substrate for each shot region.

4. The imprint apparatus according to claim 3, wherein

the plurality of shot regions include a first shot region and a second shot region, and

the control unit converts, based on the information, a moment difference between the first shot region and the second shot region into a relative tilt difference, and determines a target relative tilt for the second shot region by correcting a target relative tilt determined for the first shot region with the relative tilt difference.

5. The imprint apparatus according to any one of claims 1 to 4, wherein the control unit obtains a moment to be generated by starting contact between the mold and the imprint material on the substrate, for each of a plurality of states which are different from each other in a relative tilt between the mold and the substrate before starting contact between the mold and the imprint material on the substrate, and generates the information based on the moment obtained for each of the plurality of states.

6. The imprint apparatus according to claim 5, further comprising

a driving unit including a plurality of actuators, and configured to drive at least one of the mold and the substrate so as to bring the mold and the substrate into contact with each other, and

a sensor configured to detect a force generated in each of the plurality of actuators,

wherein the control unit obtains a moment from a detection result in the sensor for each of the plurality of states.

7. The imprint apparatus according to claim 6, wherein the allowable range is a range of the moment when a difference among the forces generated in the plurality of actuators falls within a target range.

8. The imprint apparatus according to claim 6 or 7, wherein the allowable range incudes a value of the

moment when a difference among the forces generated in the plurality of actuators is zero.

9. The imprint apparatus according to any one of claims 1 to 8, wherein the control unit generates the information for each mold.

10. The imprint apparatus according to any one of claims 1 to 9, wherein the allowable range is a range of the moment when a distortion of a pattern transferred on the substrate falls within a target range.

11. The imprint apparatus according to any one of claims 1 to 10, wherein the control unit controls contact between the mold and the imprint material so as to maintain the relative tilt between the mold and the substrate.

12. A method of manufacturing an article, the method comprising:

forming a pattern on a substrate using an imprint apparatus according to any one of claims 1 to 11;

processing the substrate, on which the pattern has been formed, to manufacture the article.

13. An imprint method of transferring, by using a mold having a pattern region in which a pattern is formed, the pattern to an imprint material on a substrate, the method comprising:

an obtaining step of obtaining information indicating a relationship between a relative tilt

between the mold and the substrate before starting contact between the mold and the imprint material on the substrate, and a moment which fluctuates the relative tilt by starting contact between the mold and the imprint material on the substrate,

a determining step of determining, based on the information obtained in the obtaining step, a target relative tilt between the mold and the substrate such that a moment to be generated by starting contact between the mold and the imprint material on the substrate falls within an allowable range; and

a contacting step of deforming the pattern region into a convex shape protruding toward the substrate, and starting contact between the mold and the imprint material on the substrate after setting the relative tilt between the mold and the substrate to the target relative tilt determined in the determining step.