WHAT IS CLAIMED IS:

1. A press-fitting method for press-fitting one of a press-fitting component and a press-fitting target component into or with the other by moving the one of the press-fitting component and the press-fitting target component in a press-fitting direction using a press-fitting tool, wherein:

the press-fitting tool comprises:

a pressing portion having a pressing surface configured to come into contact with the press-fitting component; and

a restriction portion having a restriction surface configured to come into contact with the press-fitting target component,

a press-fitting direction position of the pressing surface of the pressing portion and a press-fitting direction position of the restriction surface of the restriction portion are set so that the one of the press-fitting component and the press-fitting target component is stopped at a prescribed press-fitting stop position,

the press-fitting method comprising:

a press-fitting stop position adjusting step of adjusting a press-fitting interval dimension in the press-fitting direction between the pressing surface of the pressing portion and the restriction surface of the restriction portion so as to obtain the press-fitting stop position of the press-fitting component that is set in the press-fitting target component according to component dimensions of the press-fitting component and component dimensions of the press-fitting target component;

a press-fitting step of press-fitting the press-fitting component with the press-fitting target component; and

a press-fitting completion step of stopping the press-fitting of the press-fitting component with the press-fitting target component by bringing the restriction portion into contact with the press-fitting target component.

2. The press-fitting method according to claim 1, wherein the press-fitting completion step comprises a pressure detecting step of detecting that a pressure acting on the press-fitting tool reaches a preset, prescribed value.

3. The press-fitting method according to claim 1, wherein the press-fitting stop position

adjusting step comprises a press-fitting interval setting step of setting the press-fitting interval dimension so that an absolute value of a difference between a preset reference interval dimension to be managed and an actual value of the reference interval dimension of a press-fit product manufactured using the press-fitting interval dimension becomes smaller than a predetermined allowable error value.

4. The press-fitting method according to claim 3, wherein the press-fitting stop position adjusting step comprises an interval calculating step of calculating the press-fitting interval dimension based on a first dimension that is a length of the press-fitting target component in the press-fitting direction, a second dimension that is a length of the press-fitting component in the press-fitting direction, and the reference interval dimension.

5. The press-fitting method according to claim 3, wherein the press-fitting stop position adjusting step comprises a press-fitting interval determining step of placing the pressing portion and the restriction portion at prescribed positions in the press-fitting tool that make the difference between the press-fitting direction position of the pressing surface of the pressing portion and the press-fitting direction position of the restriction surface of the restriction portion equal to the press-fitting interval dimension that is set by the press-fitting interval setting step.

6. The press-fitting method according to claim 3, wherein:

the press-fitting step moves the press-fitting tool in the press-fitting direction from a state that the pressing surface and the restriction surface are located at respective execution initial positions; and

the press-fitting stop position adjusting step comprises a press-fitting interval executing step of placing the pressing surface and the restriction surface to the respective execution initial positions by moving at least one of the pressing portion and the restriction portion so that the difference between the press-fitting direction position of the pressing surface and the press-fitting direction position of the restriction surface becomes equal to the press-fitting interval dimension that is set by the press-fitting interval setting step.

7. The press-fitting method according to any one of claims 1 to 4, wherein:

the restriction portion has a single restriction surface; and

the pressing portion has plural pressing surfaces that are provided in advance at a prescribed interval,

the press-fitting method further comprising:

a pressing surface selecting step of selecting one of the plural pressing surfaces so as to obtain the press-fitting stop position that is suitable for the press-fitting interval dimension that is set according to dimensions of the press-fitting component and the press-fitting target component.

8. The press-fitting method according to any one of claims 1 to 4, wherein:

the pressing portion has a single pressing surface; and

the restriction portion has plural restriction surfaces that are provided in advance at a prescribed interval,

the press-fitting method further comprising:

a restriction surface selecting step of selecting one of the plural restriction surfaces so as to obtain the press-fitting stop position that is suitable for the press-fitting interval dimension that is set according to dimensions of the press-fitting component and the press-fitting target component.

9. The press-fitting method according to claim 7 or 8, wherein the press-fitting stop position adjusting step comprises a switching step of switching to at least one of the selected pressing surface and the selected restriction surface.

10. The press-fitting method according to any one of claims 3 to 6, wherein:

the press-fitting target component has a large-diameter portion, a small-diameter portion that is smaller in diameter than the large-diameter portion, and a step surface that connects the large-diameter portion and the small-diameter portion;

the press-fitting component is a component that extends in the press-fitting direction and is shaped like a cylinder or a polygonal prism, and has a hole that extends in the press-fitting direction and through which the small-diameter portion is to be inserted; and

the small-diameter portion extends in the press-fitting direction by a length being longer than the reference interval dimension from the step surface.

11. A manufacturing method for manufacturing a press-fit product in which a press-fitting component is fitted with a press-fitting target component, comprising:

a preparing step of preparing the press-fitting component and the press-fitting target

component; and

a press-fitting step of press-fitting one of the press-fitting component and the press-fitting target component into or with the other by moving the one of the press-fitting component and the press-fitting target component in a press-fitting direction using a press-fitting tool, wherein:

the press-fitting tool comprises:

a pressing portion having a pressing surface configured to come into contact with the press-fitting component; and

a restriction portion having a restriction surface configured to come into contact with the press-fitting target component,

a press-fitting direction position of the pressing surface of the pressing portion and a press-fitting direction position of the restriction surface of the restriction portion are set so that the one of the press-fitting component and the press-fitting target component is stopped at a prescribed press-fitting stop position; and

the press-fitting step comprises:

a press-fitting stop position adjusting step of adjusting a press-fitting interval dimension in the press-fitting direction between the pressing surface of the pressing portion and the restriction surface of the restriction portion so as to obtain the press-fitting stop position that is set according to component dimensions of the press-fitting component and component dimensions of the press-fitting target component;

a moving step of press-fitting the press-fitting component with the press-fitting target component; and

a press-fitting completion step of stopping the press-fitting of the press-fitting component with the press-fitting target component by bringing the restriction portion into contact with the press-fitting target component.

12. The manufacturing method according to claim 11, wherein the press-fitting completion step comprises a pressure detecting step of detecting that a pressure acting on the press-fitting tool reaches a preset, prescribed value.

13. The manufacturing method according to claim 11, wherein the press-fitting stop position adjusting step comprises a press-fitting interval setting step of setting the press-fitting interval dimension so that an absolute value of a difference between a preset reference interval

dimension to be managed and an actual value of the reference interval dimension of a press-fit product manufactured using the press-fitting interval dimension becomes smaller than a predetermined allowable error value.

14. The manufacturing method according to claim 13, wherein:

the preparing step comprises:

a first measuring step of measuring and acquiring a first dimension that is a length of the press-fitting target component in the press-fitting direction; and

a second measuring step of measuring and acquiring a second dimension that is a length of the press-fitting component in the press-fitting direction; and

the press-fitting stop position adjusting step comprises an interval calculating step of calculating the press-fitting interval dimension based on the first dimension, the second dimension, and the reference interval dimension.

15. The manufacturing method according to claim 13, wherein:

the moving step moves the press-fitting tool in the press-fitting direction from a state that the pressing surface and the restriction surface are located at respective execution initial positions; and

the press-fitting stop position adjusting step comprises a press-fitting interval executing step of placing the pressing surface and the restriction surface to the respective execution initial positions by moving at least one of the pressing portion and the restriction portion so that the difference between the press-fitting direction position of the pressing surface and the press-fitting direction position of the restriction surface becomes equal to the press-fitting interval dimension that is set by the press-fitting interval setting step.

16. The manufacturing method according to any one of claims 11 to 15, further comprising:

a tentative press-fitting step of press-fitting the press-fitting component with the press-fitting target component tentatively.

17. The manufacturing method according to any one of claims 11 to 16, wherein:

the restriction portion has a single pressing surface;

the restriction portion has plural restriction surfaces that are provided in advance at a

prescribed interval; and

the press-fitting step comprises a restriction surface selecting step of selecting one of the plural restriction surfaces so as to obtain the press-fitting stop position that is suitable for the press-fitting interval dimension that is set according to dimensions of the press-fitting component and the press-fitting target component.

18. The manufacturing method according to any one of claims 11 to 17, wherein the press-fitting stop position adjusting step comprises a switching step of switching to the selected restriction surface.

19. The manufacturing method according to claim 13, further comprising:

an inspection step of measuring a completion interval dimension that is an interval in the press-fitting direction between a prescribed position of the press-fitting target component of the press-fit product produced by the moving step and a prescribed position of the press-fitting component of the press-fit product, and comparing the measured completion interval dimension with the reference interval dimension.