

A cross-sectional view of a semiconductor device 10. The device is built on a substrate 41 with a layer 42 on top. A base layer 13 is formed on the substrate. Above the base layer is a layer 14, which contains a central region 15. A layer 16 is formed on top of layer 14, with a central region 17A and side regions 17B. A layer 19 is formed on top of layer 16, with a central region 19 and side regions 19. A layer 12 is formed on top of layer 19, with a central region 12 and side regions 12. A layer 11 is formed on top of layer 12, with a central region 11 and side regions 11. The device is subjected to a pressure P_g from the top. The width of the central region 15 is labeled W , and the width of the central region 17A is labeled $w1$. The thickness of the base layer 13 is labeled d .

This cross-sectional view shows a substrate 10 with a thick layer 11 on top. Layer 11 contains a rectangular region 12 with a stippled pattern. Below layer 11 is a thin layer 13. A layer 17A is positioned above layer 13, and a layer 17B is positioned below it. A small rectangular feature 19 is located within layer 17A. The outer peripheral edge of layer 17B is indicated by an arrow. The inner peripheral edge of layer 13 is also indicated by an arrow. A wavy line labeled 'W' is shown at the bottom of the diagram.

Fig.3

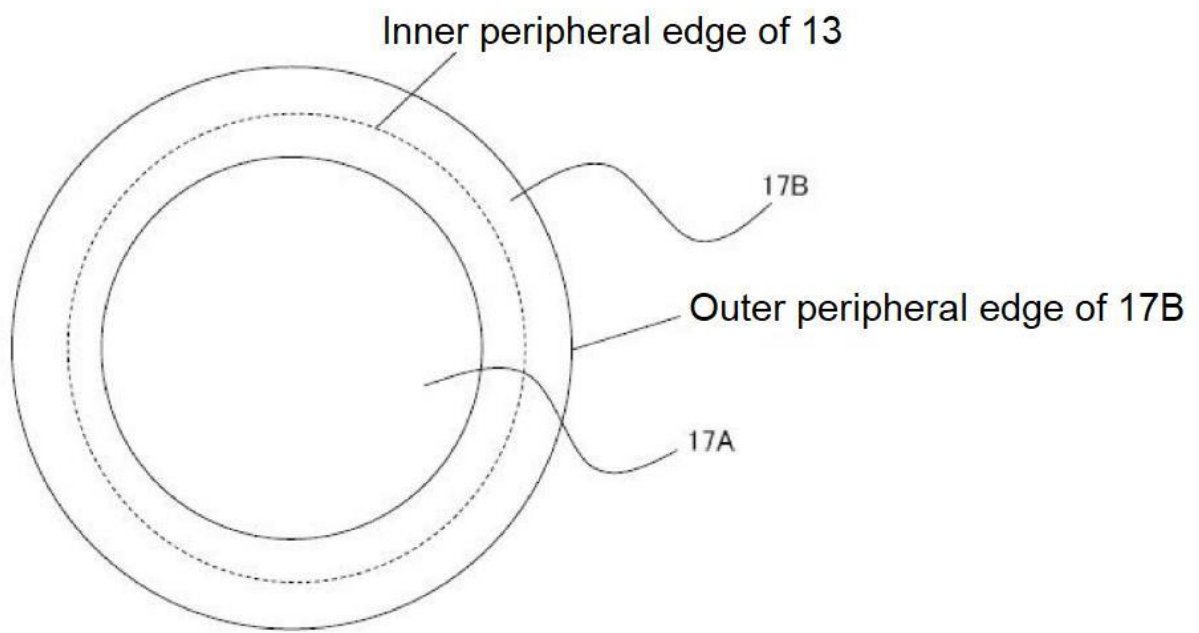


Fig.4A

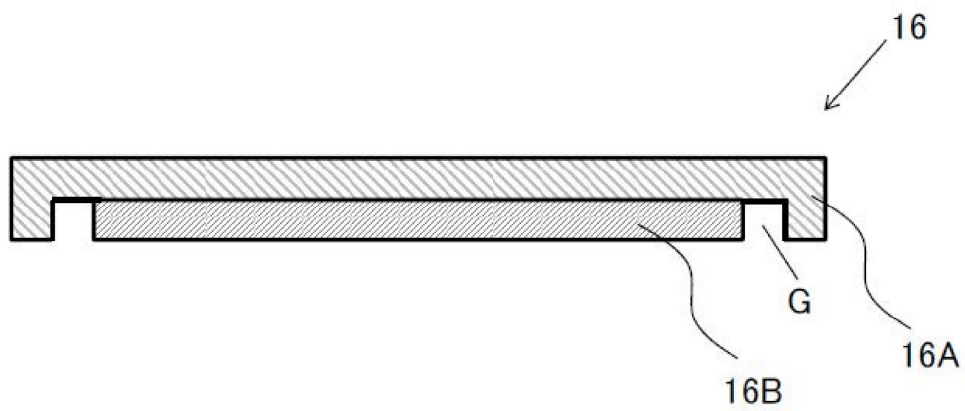


Fig.4B

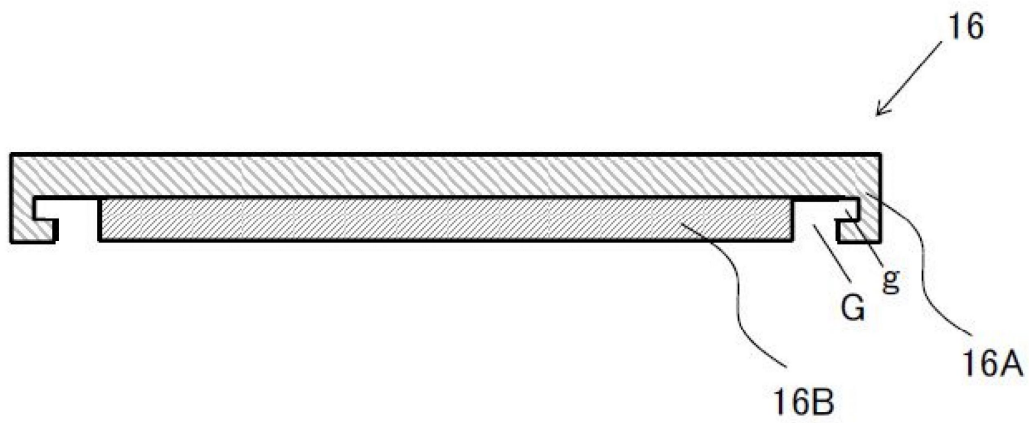


Fig.5A

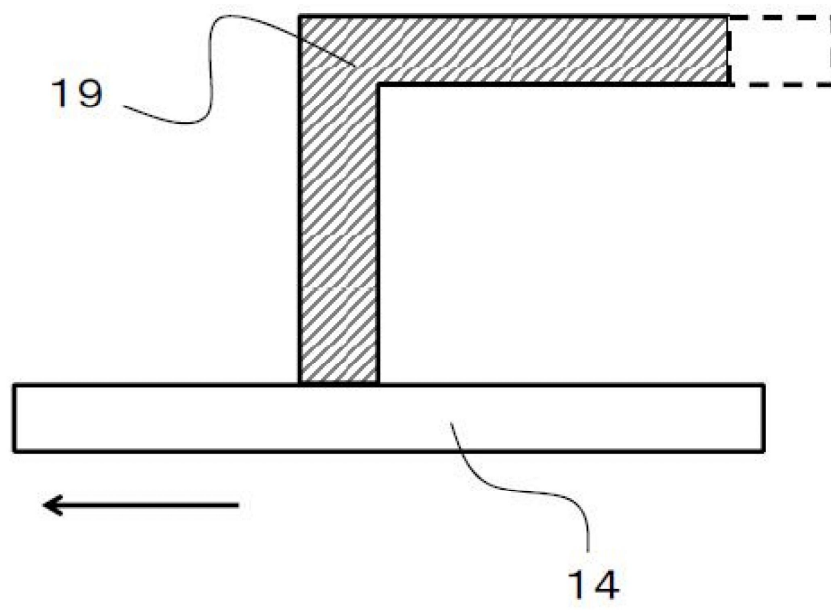


Fig.5B

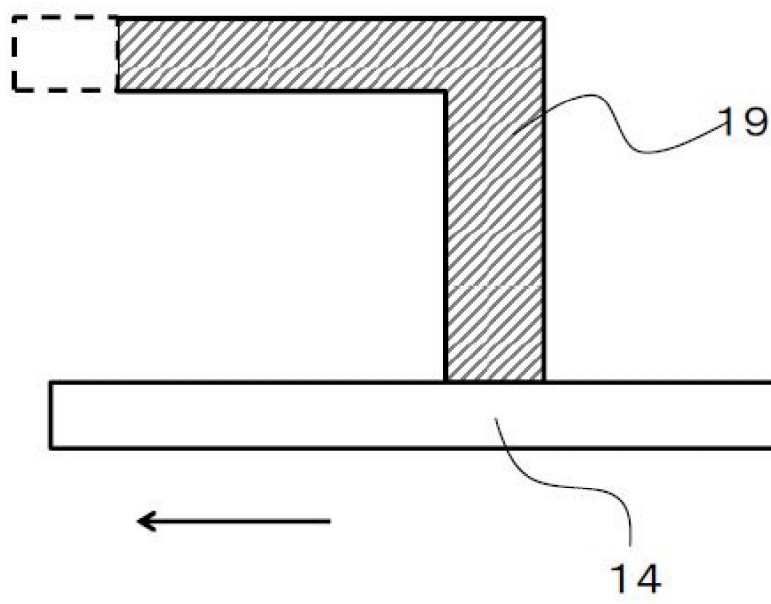


Fig.5C

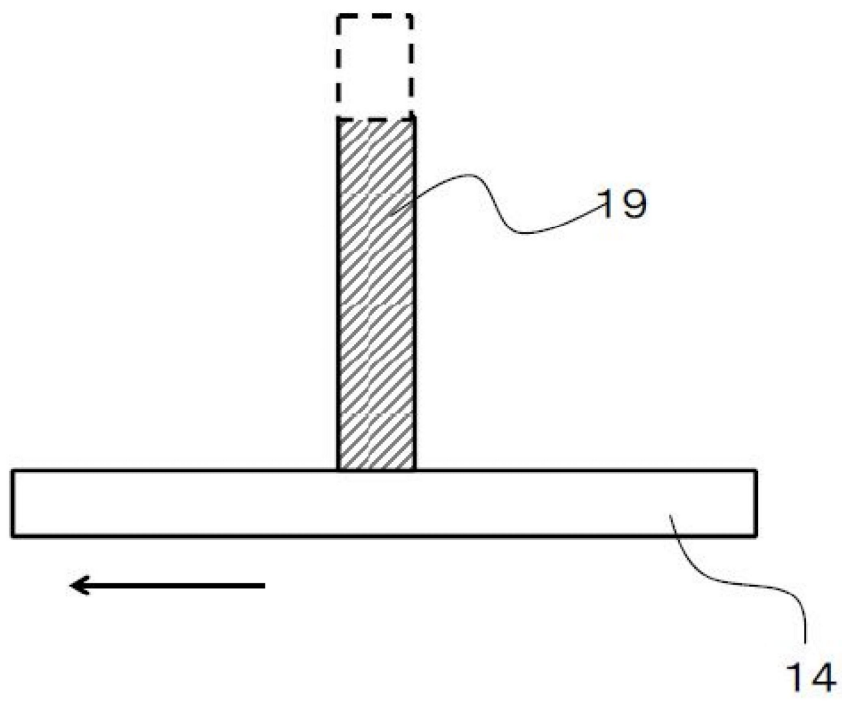


Fig.5D

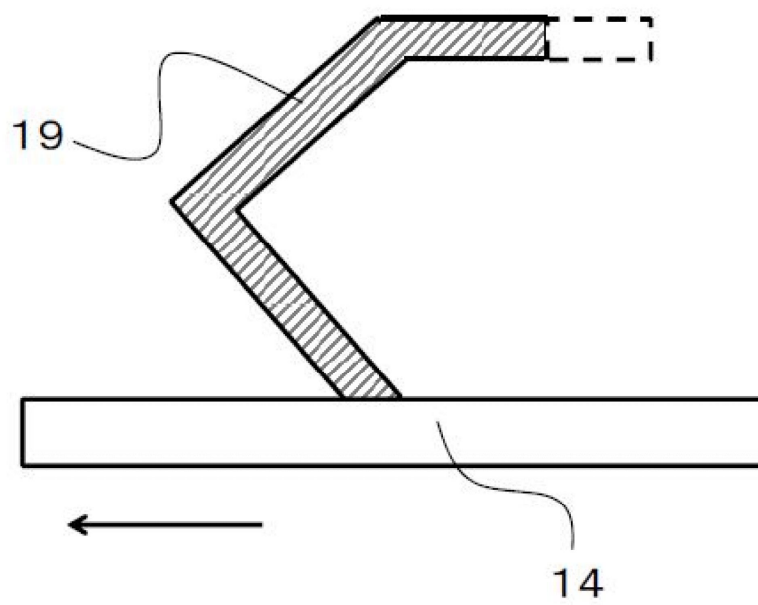


Fig.5E

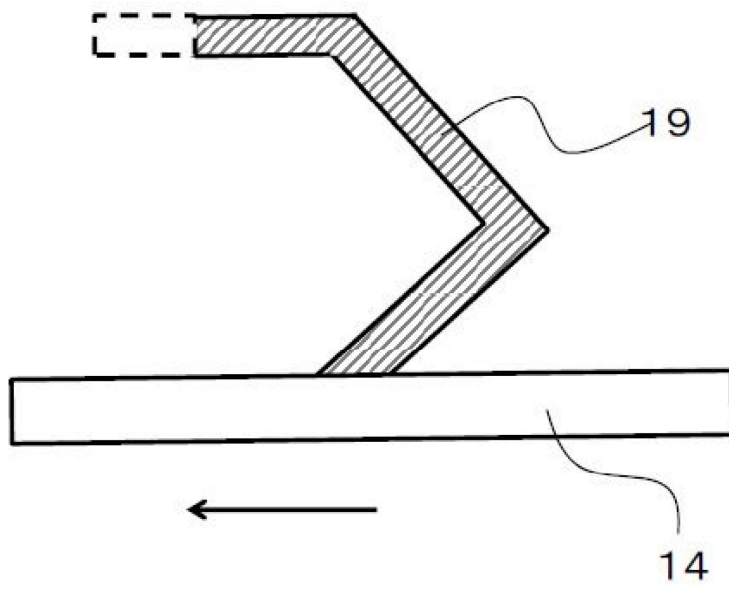


Fig.5F

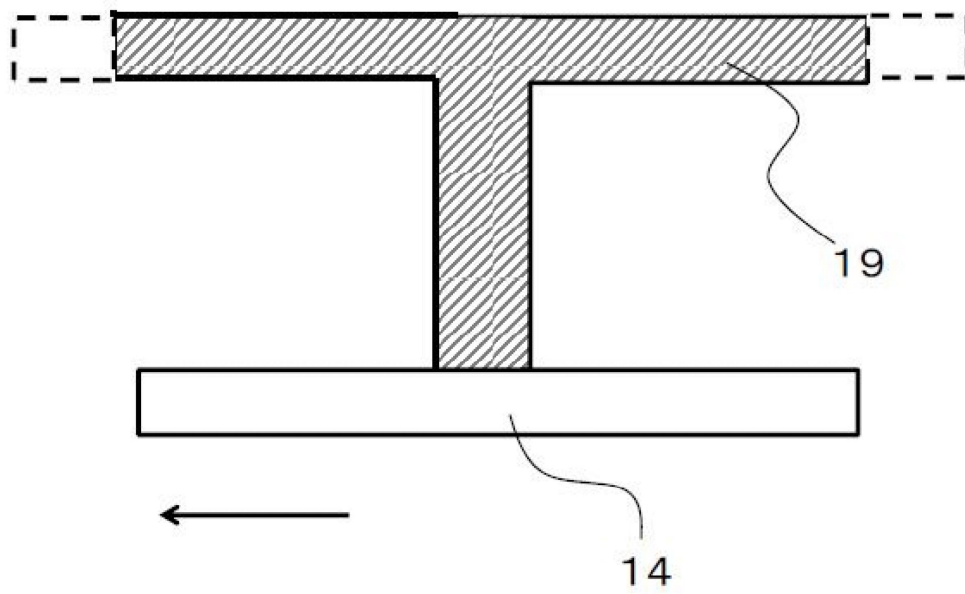


Fig.8

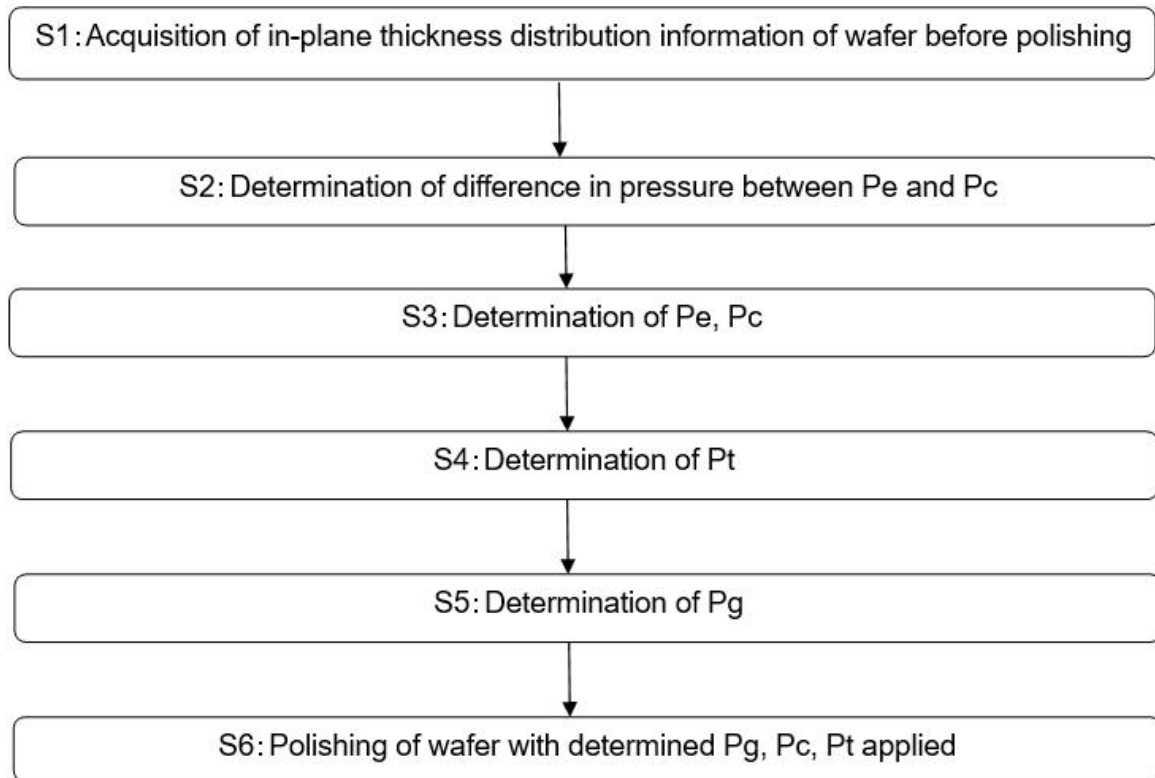


Fig.9

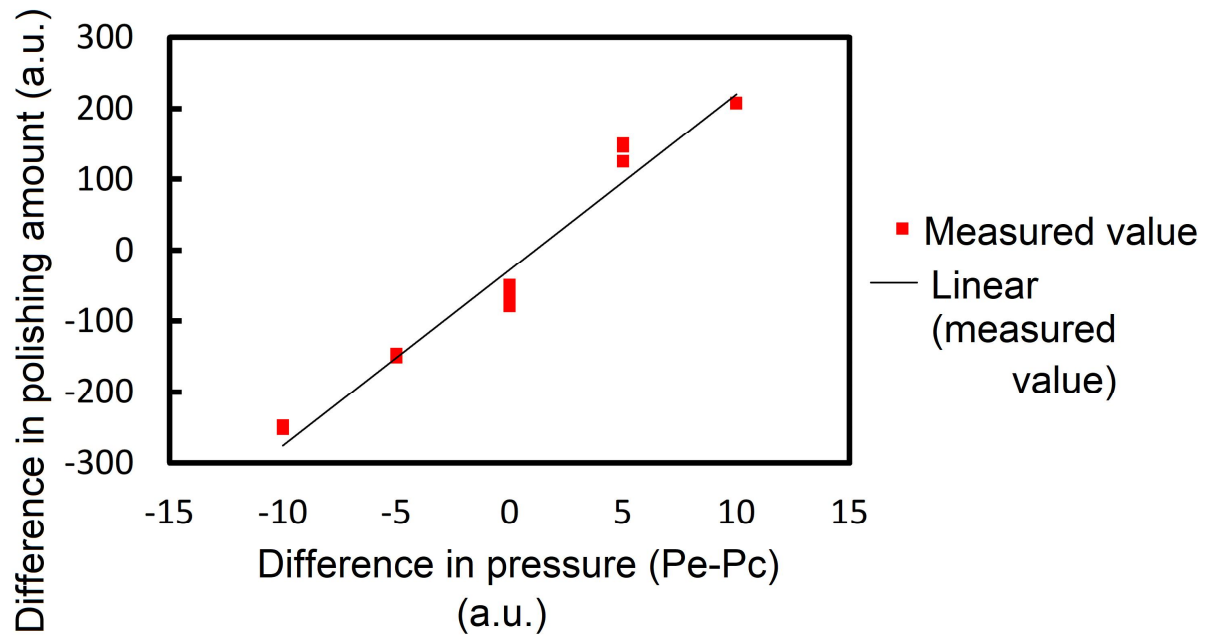


Fig.10

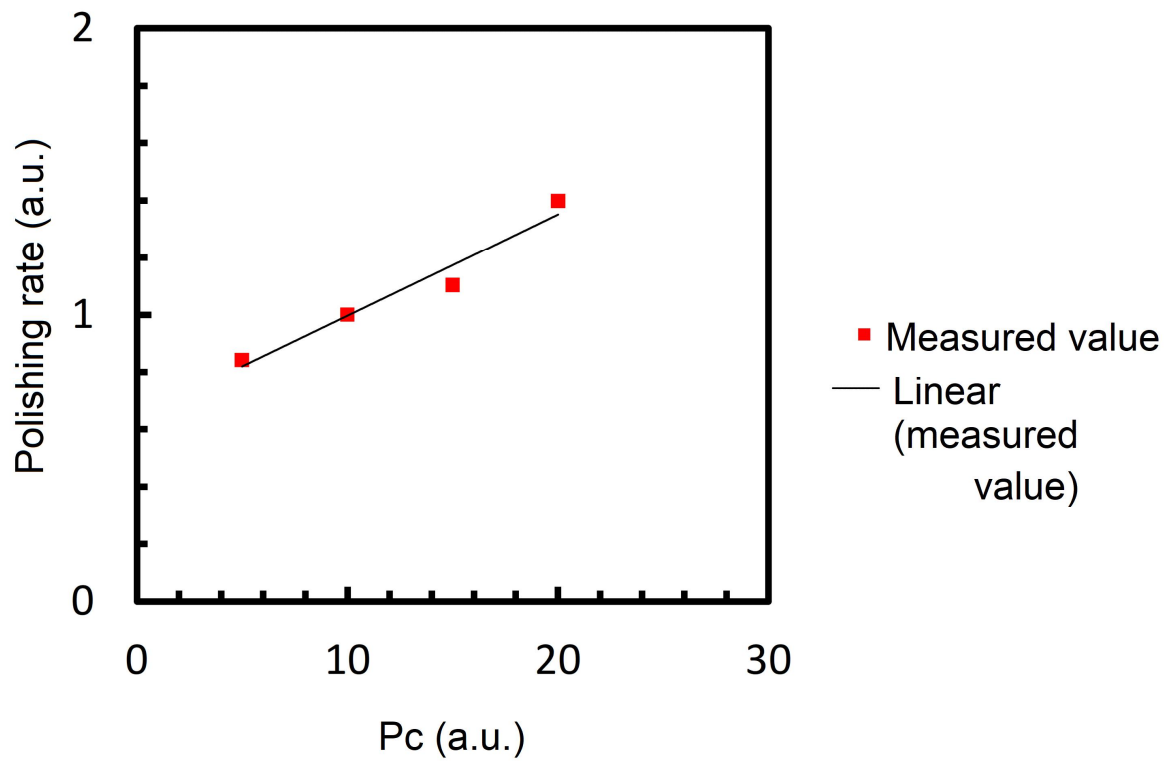


Fig.11

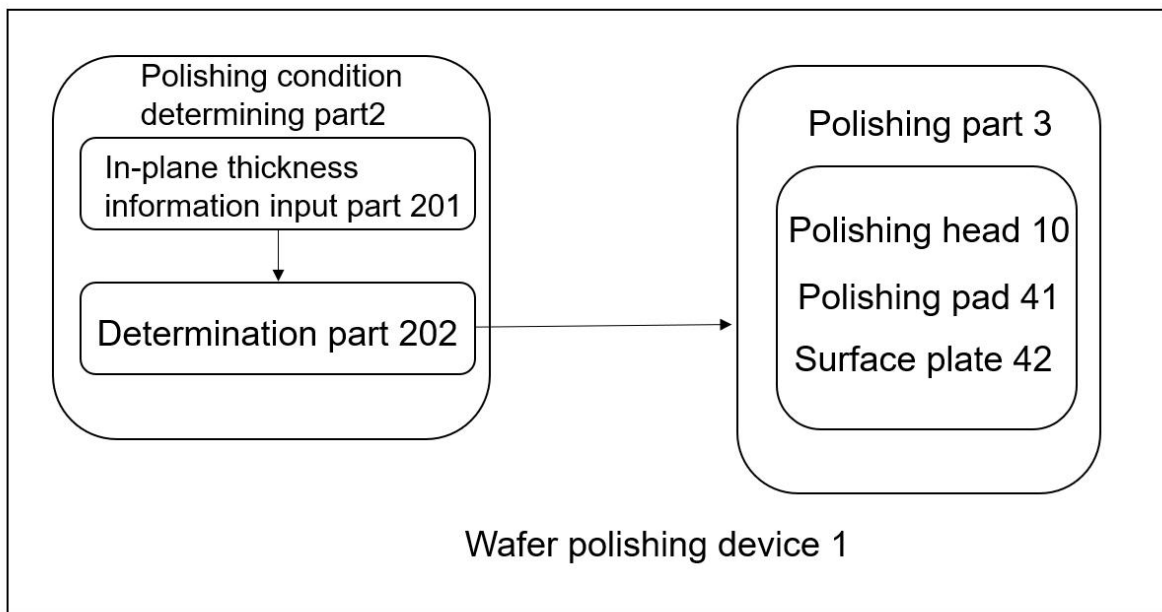


Fig.12

