WHAT IS CLAIMED IS:

1. An inspecting apparatus for inspecting a test piece attached to a transparent adhesive tape and supported through said adhesive tape to a ring frame, said inspecting apparatus comprising:

a test piece holding mechanism for holding said test piece, said test piece holding mechanism having a mounting portion formed from a transparent member having upper and lower exposed surfaces, said upper exposed surface of said transparent member functioning as a mounting surface for mounting said test piece through said adhesive tape, whereby said test piece mounted on said mounting surface of said mounting portion through said adhesive tape is adapted to be held by said test piece holding mechanism;

an imaging mechanism for imaging said test piece held by said test piece holding mechanism, said imaging mechanism having a first imaging unit provided above said mounting portion, a second imaging unit provided below said mounting portion, and a connecting portion for connecting said first imaging unit and said second imaging unit; and

a moving unit for relatively moving said imaging mechanism with respect to said mounting portion in a direction parallel to said mounting surface, wherein

said first imaging unit of said imaging mechanism is adapted to image the upper surface of said test piece mounted

on said mounting surface of said mounting portion and held by said test piece holding mechanism,

said second imaging unit of said imaging mechanism is adapted to image the lower surface of said test piece mounted on said mounting surface of said mounting portion and held by said test piece holding mechanism, and

said first imaging unit and said second imaging unit are adapted to image the upper surface and the lower surface of said test piece at a same position in said direction parallel to said mounting surface,

wherein

said test piece holding mechanism further has:

a tape holding portion having a tape holding surface for holding said adhesive tape under suction, said tape holding surface being formed around an outer circumference of said mounting portion, said adhesive tape being held under suction in an annular area defined between an outer circumference of said test piece mounted on said mounting surface and an inner circumference of said ring frame; and

a frame supporting portion provided around said tape holding portion for supporting said ring frame,

the transparent member does not have suction grooves and holes.

2. The inspecting apparatus according to claim 1, wherein

a height of said mounting surface of said mounting portion is lower than a height of said tape holding surface of said tape holding portion.

3. The inspecting apparatus according to claim 1, wherein

said mounting surface of said mounting portion is coated with fluororesin.

4. A processing apparatus for processing a workpiece attached to a transparent adhesive tape and supported through said adhesive tape to a ring frame, said processing apparatus comprising:

a workpiece holding unit for holding said workpiece;

a processing unit for processing said workpiece held by said workpiece holding unit;

an inspecting apparatus for inspecting said workpiece processed by said processing unit; and

a transfer unit for transferring said workpiece from said workpiece holding unit to said inspecting apparatus, wherein

said inspecting apparatus includes

a workpiece holding mechanism for holding said

workpiece, said workpiece holding mechanism having a mounting portion formed from a transparent member having upper and lower exposed surfaces, said upper exposed surface of said transparent member functioning as a mounting surface for mounting said workpiece through said adhesive tape, whereby said workpiece mounted on said mounting surface of said mounting portion through said adhesive tape is adapted to be held by said workpiece holding mechanism,

an imaging mechanism for imaging said workpiece held by said workpiece holding mechanism, said imaging mechanism having a first imaging unit provided above said mounting portion, a second imaging unit provided below said mounting portion, and a connecting portion for connecting said first imaging unit and said second imaging unit, and

a moving unit for relatively moving said imaging mechanism with respect to said mounting portion in a direction parallel to said mounting surface,

said first imaging unit of said imaging mechanism is adapted to image the upper surface of said workpiece mounted on said mounting surface of said mounting portion and held by said workpiece holding mechanism,

said second imaging unit of said imaging mechanism is adapted to image the lower surface of said workpiece mounted on said mounting surface of said mounting portion and held by said workpiece holding mechanism, and

said first imaging unit and said second imaging unit are

adapted to image the upper surface and the lower surface of said workpiece at a same position in said direction parallel to said mounting surface,

wherein

said workpiece holding mechanism further has:

a tape holding portion having a tape holding surface for holding said adhesive tape under suction, said tape holding surface being formed around an outer circumference of said mounting portion, said adhesive tape being held under suction in an annular area defined between an outer circumference of said workpiece mounted on said mounting surface and an inner circumference of said ring frame; and

a frame supporting portion provided around said tape holding portion for supporting said ring frame,

the transparent member does not have suction grooves and holes.

5. The processing apparatus according to claim 4, wherein

a height of said mounting surface of said mounting portion is lower than a height of said tape holding surface of said tape holding portion.

6. The processing apparatus according to claim 4, wherein

said mounting surface of said mounting portion is coated

with fluororesin.