Claims

1. A device for bonding of a second substrate (5) onto a first substrate (2) with the following features:

- a receiving apparatus (1) for receiving the first substrate (2) which has been coated with a bond layer (3) and the second substrate (5) which is held on the bond layer (3),
- an action apparatus for applying a bond force to the second substrate (5) on one action side (5o) of the second substrate (5), which side faces away from the bond layer (3) proceeding from an initial zone A which lies within an edge zone R of the action side (5o) as far as action on the entire action side (5o), wherein the second substrate (3), which is deposited on the bond layer (3), can be bent by the action apparatus towards the center of the bond layer (3) and the action apparatus comprises a pressure disc (6) with a convexly curved pressure transfer side (6u), wherein the pressure disc (6) is formed from a lower disk (9) which encompasses the pressure transfer side (6u) and of a retaining disc (4) which fixes the pressure disc (6).

~~2. The device as claimed in Claim 1, wherein the action apparatus has a pressure disc (6) with a convexly curved pressure transfer side (6u).~~

~~3~~2. The device as claimed in Claim ~~2~~1, wherein the tangential plane of the pressure transfer side (6u) is spaced in the direction of the normal to ~~the tangential plane~~ an imaginary plane of an ideally planar pressure transfer side at least by 5 nm and/or a maximum 500 μm, especially at least by 20 nm and/or a maximum 200 μm, preferably at least by 50 nm and/or at maximum 50 μm, more preferably at least 100 nm and/or a maximum 5 μm.

43. The device as claimed in at least one of the preceding claims, wherein the initial zone A is arranged concentrically to the action side (5o).

~~5~~4. The device as claimed in at least one of the preceding claims, wherein the action apparatus has a punch which applies the bond force controlled by a control apparatus.

~~6~~5. The device as claimed in ~~Claim 2~~ at least one of the preceding claims, wherein the pressure disc is ~~formed from a lower disk (9) which encompasses the pressure transfer side (6u) and of a retaining disc (4) which fixes the pressure disc (6), especially in the~~ fixed by the retaining disc (4) in a region of one periphery P via fixing means (8).

~~7~~6. The device as claimed in Claim ~~6~~5, wherein the lower disc (9) in the region of the initial zone A is made thicker than on the periphery P.

~~8~~7. The device as claimed in Claim ~~6~~1, wherein between the lower disc (9) and the retaining disc (4) in the region of the initial zone A there is a spacer element (7).

~~9~~8. The device as claimed in Claim ~~6~~4, wherein for setting the curvature of the pressure transfer side (6u) there is a curvature element (10) which acts on the lower disk (9) opposite the retaining disc (4) in the region of the initial zone A, especially controlled by the control apparatus.

~~10~~9. A method for bonding of a second substrate (5) onto a first substrate (2) with the following steps, especially the following sequence:

- ~~a receiving apparatus (1) for~~ receiving the first substrate (2) which has been coated with a bond layer (3) and the second substrate (5) which is held on the bond layer (3),
- ~~an action apparatus for~~ applying a bond force to the second substrate (5) on one action side (5o) of the second substrate (5), which side faces away from the bond layer (3) proceeding from an initial zone A which lies within an edge zone R of the action side (5o) as far as action on the entire action side (5o), wherein the second substrate (3), which is deposited on the bond layer (3), is bent by the action apparatus towards the center of the bond layer (3) and the action apparatus comprises a pressure disc (6) with a convexly curved pressure transfer side (6u).