Claims

1. A de-burring system for removing burrs from IC units, the system comprising

a shear plate having a plurality of pockets;

each pocket shaped to receive one of said IC units;

wherein each pocket includes at least one dimension sized to shear a burr from opposed peripheral sides of said IC unit;

wherein each peripheral edge of the pocket is arranged to shear burrs from each peripheral side of said IC unit; and

wherein said each peripheral edge of the pocket is a shearing edge.

2. The system according to claim 1, wherein only two opposed peripheral edges of the pocket is arranged to shear burrs from each peripheral side of said IC unit.

3. The system according to claim 1 or 2, further including a precision picker arranged to engage and insert the IC unit into the pocket, said precision picker having at least 4 degrees of freedom, one of said degrees of freedom being rotation about a vertical axis.

4. The system according to any one of claims 1 to 3, further including an extractor arranged to remove detritus resulting from the removed burrs.

5. The system according to any one of claims 1 to 4, further including a roller arranged to pass over a top surface of said shear plate, the roller arranged to remove detritus from the top surface.

6. The system according to any one of claims 1 to 5, further including a polishing station comprising counter rotating brushes, said brushes arranged to remove detritus adhering to the IC unit on placement of the IC unit in contact with said brushes.

7. A method for removing burrs from IC units placed on an adhesive film of a substrate template, the method comprising the steps of:

inserting an IC unit into a pocket within a shearing plate, said pocket shaped to receive one of said IC units, and at least one dimension sized to shear a burr from opposed peripheral sides of said IC unit, and so;

shearing said burr from each peripheral side of the IC unit using each peripheral edge of the pocket;

wherein said each peripheral edge is a shearing edge.

8. The method according to claim 7, further comprising the steps of:

applying heat to an underside of the adhesive film for a pre-determined time at a pre-determined temperature;

reducing adhesive strength of said adhesive film and so reducing the required force to remove said IC unit, and;

removing said IC unit.

9. The method according to claim 8, wherein the removing step includes the steps of engaging the IC unit with a picker and lifting the IC unit from the adhesive film.

10. The method according to claim 8 or 9, further including the step of applying a force to the IC unit to assist in the removal of said IC unit.