**Claims**

1. A transfer moulding press for encapsulating electronic components mounted on a carrier, comprising:

- at least two press parts displaceable relative to each other for supporting at least two co-operating mould parts, at least one of which mould parts being provided with at least one mould cavity recessed into a contact side for enclosing at least one electronic components placed on the carrier, the contact surface of this mould part at least partially enclosing the mould cavity for medium-tight connection onto the carrier in a closed position of the mould parts;
- a drive system for driving the relative displacement of the press parts; and
- an intelligent control connecting to the drive system of the press parts, said intelligent control being adapted to control the drive system of the press parts,

wherein the drive system comprises at least two individual controllable actuators, and wherein the intelligent control further connects to plural displacement sensors for detecting the relative displacement of the press parts at various locations, **characterised in that**, and wherein the intelligent control is adapted to control the actuators of the drive system dynamically over time based on the measured values detected with the displacement sensors to change the distribution of the pressure exerted by the drive system on at least one of the press parts during feeding of an encapsulating material into the mould cavity, wherein the mould parts are in a closed position and the press parts mutually exert pressure.

2. The transfer moulding press according to claim 1, **characterised in that** the drive system comprises at least three individual controllable actuators.

3. The transfer moulding press according to claim 1 or 2, **characterised in that** the direction of the pressure exerted by the actuators corresponds to the direction of displacement of the actuators.

4. The transfer moulding press according to any of the preceding claims, **characterised in that** the individual controllable actuators are pressure cylinders.

5. The transfer moulding press according to claim 4, **characterised in that** at least three pressure cylinders co-act with a single press part.

6. The transfer moulding press according to any of the preceding claims, **characterised in that** the displacement sensors are sensitive to relative displacements of microns.

7. The transfer moulding press according to any of the preceding claims, **characterised in that** the displacement sensors are adapted to detect objects which should not be present at the place the objects are detected.

8. The transfer moulding press according to any of the preceding claims, **characterised in that** the press with mould parts also comprises feed means provided with at least one plunger for the purpose of exerting pressure on a liquid encapsulating material such that the encapsulating material is displaced to the mould cavity enclosing the electronic component.

9. The transfer moulding press according to claim 8, **characterised in that** the press further comprises releasing means to facilitate the release of the at least one mould part being provided with at least one mould cavity recessed into a contact side for enclosing at least one electronic component placed on the carrier, wherein the contact side is formed by the contact surface of the releasing means and the contact surface of the at least one mould part the releasing means cooperate with.

10. The transfer moulding press according to claim 9, **characterised in that** the releasing means are displaceable in a direction substantially perpendicular to the direction of the relative displacement of the press parts.

11. The transfer moulding press according to claim 9 or 10, **characterised in that** the releasing means comprise a feed channel for feeding encapsulating material to the mould cavity.

12. Actuator set for converting a press for encapsulating electronic components mounted on a carrier to a press according to any of the preceding claims, the actuator set comprises:

- at least one actuator for driving the relative displacement of one of the press parts of the press, said at least one actuator being adapted to be assembled

with one of the press parts and to be connected to an intelligent control of the press; and

- displacement sensors for detecting the relative displacement of the press parts of the press at various locations, said displacement sensors being adapted to be assembled with the press parts of the press and to be connected to the intelligent control of the press.

13. The actuator set according to claim 12, **characterised in that** the actuator set also comprises an intelligent control program for processing information of the displacement sensors to control the combined drive system of the press.

14. Method for encapsulating electronic components mounted on a carrier with encapsulating material, comprising the processing steps of:

A) placing an electronic component for encapsulating on a mould part,

B) relatively displacing at least two mould parts towards each other with a closing force such that the electronic components for encapsulating are enclosed by at least one mould cavity and the carrier is clamped between the mould parts,

C) exerting pressure on a liquid encapsulating material with at least one plunger such that encapsulating material is displaced to the at least one mould cavity enclosing the electronic components,

D) filling the mould cavity with encapsulating material, and

E) at least partially curing the encapsulating material in the mould cavity,

wherein the distribution of the pressure exerted on at least one of the mould parts during at least processing step D) is varied dependent on measured local displacements of the mould parts.

15. The method for encapsulating according to claim 14, **characterized in that** the distribution of the pressure exerted on at least one of the mould parts during at least processing steps D) and E) is varied dependent on measured local displacements of the mould parts.

16. The method for encapsulating according to claim 14 or 15, **characterized in that** the distribution of the pressure exerted on at least one of the mould parts is

varied by individually controlling at least two independent controllable actuators cooperating with at least one of the mould parts.

17. The method for encapsulating according to any of the claims 14 - 16, **characterized in that** the distribution of the pressure exerted on at least one of the mould parts is at least partially controlled by feedback of the measured local displacements of the mould parts.

18. The method for encapsulating according to any of the claims 14 - 17, **characterized in that** the distribution of the pressure exerted on at least one of the mould parts is at least partially controlled by feed forward of at least one detected process variable.

19. The method for encapsulating according to any of the claims 14 - 18, **characterized in that** the distribution of the pressure exerted on at least one of the mould parts is at least partially controlled by stored historical process information.

20. The method for encapsulating according to any of the claims 14-19, **characterized in that** before clamping the carrier between the mould parts in step B), the method further comprising the step of displacing releasing means in a direction substantially perpendicular to the direction of the relative displacement of the at least two mould parts such that the releasing means form part of the contact side of the at least one mould part provided with the at least one mould cavity to clamp the carrier between the releasing means and the mould parts.

21. The method for encapsulating according to claim 20, **characterized in that**, before clamping the carrier between the releasing means and the mould parts, the method further comprising a calibration step, including relatively displacing the at least two mould parts towards each other with a closing force such that the electronic components for encapsulating are enclosed by at least one mould cavity and the carrier is clamped between the mould parts.