In additional favorable embodiments, the amount of deficient products during the manufacturing process and the rejection rate may be reduced.

According to a first aspect of the present invention, there is provided a method for manufacturing a cannula system with a body unit and a compressing unit, the method comprising the steps:

- Providing a body unit comprising a mounting structure, the body being mounted onto a molding core pin, wherein the body unit is optionally provided by injection molding onto the molding core pin;
- Threading a soft cannula on the mounting structure of the body unit;
- Injection molding of the compressing unit on the soft cannula and at least parts of the body unit, wherein the compressing unit circumferentially surrounds the mounting structure, at least parts of the soft cannula and at least parts of the body unit;
- Cooling of the compressing unit, thereby shrinking and inducing an internal material tension of the compressing unit;
- Removing the molding core pin.

- as the risk of leakage between the cannula and the mounting structure and/or between the cannula and the compressing unit is further decreased.

- In some embodiments, the internal material tension of the compressing unit compresses the parts of the soft cannula threaded on the mounting structure. In such embodiments, at least the part of the cannula which is circumferentially surrounded by the compressing unit, preferably the distal end area, is compressed. Thus, the wall thickness of the cannula of this part is smaller than the wall thickness of the rest of the cannula which is not circumferentially surrounded by the compressing unit.

- In further embodiments, the body unit and the compressing unit and/or the compressing unit and the soft cannula form a bonded connection during injection molding of the compressing unit.

- In some embodiments, the methods may in general consist of two separate injection molding steps, thereby reducing the required amount of manufacturing steps and the overall production time and costs even further.

- According to a second aspect of the present invention, there is provided a cannula system comprising a soft cannula and a cannula unit for holding the soft cannula, wherein the cannula unit comprises a compressing unit and a body unit, wherein the body unit contains a mounting structure and a cavity for holding a septum, wherein the soft cannula is threaded on the mounting structure, wherein the compressing unit circumferentially surrounds the mounting structure and at least parts of the body unit and wherein the compressing unit contains an internal material tension induced by shrinking of the compression unit for exerting a compression force on the soft cannula and the mounting structure.

Claims

1. A method for manufacturing a cannula system with a body unit and a compressing unit, the method comprising the steps:

- Providing a body unit comprising a mounting structure, the body being mounted onto a molding core pin, wherein the body unit is optionally provided by injection molding onto the molding core pin;
- Threading a soft cannula on the mounting structure of the body unit;
- Injection molding of the compressing unit on the soft cannula and at least parts of the body unit, wherein the compressing unit circumferentially surrounds the mounting structure, at least parts of the soft cannula and at least parts of the body unit;
- Cooling of the compressing unit, thereby shrinking and inducing an internal material tension of the compressing unit;
- Removing the molding core pin.

2. The method according to claim 1, wherein only a distal end area of the soft cannula is threaded on the mounting structure of the body unit and wherein the compressing unit preferably circumferentially surrounds only the distal end area of the soft cannula.

3. The method according to claim 2, wherein the distal end area is provided with a locking structure for establishing a form lock and/or an adhesive bond between the soft cannula and the compressing unit.

4. The method according to claim 3, wherein prior to threading the soft cannula on the mounting structure of the body unit, a locking structure is generated at the distal end area of the soft cannula.

5. The method according to any of claims 3 or 4, wherein the locking structure includes at least one protrusion, preferably a collar arranged at the most distal part of the distal end area, protruding from the distal end area and/or at least one hole, preferably a through bore or a blind hole.

6. The method according to any of claims 2 to 5, wherein the distal end area of the soft cannula has a larger diameter than the rest of the cannula before the cannula is threaded on the mounting structure.

7. The method according to any of the previous claims, wherein the internal material tension of the compressing unit exerts a compression force which is directed radially inwards and/or wherein the internal material tension of the compressing unit compresses the soft cannula.

8. The method according to any of the previous claims, wherein the body unit and the compressing unit and/or wherein the compressing unit and the soft cannula form a bonded connection during injection molding of the compressing unit.

9. A cannula system comprising a soft cannula and a cannula unit for holding the soft cannula, wherein the cannula unit comprises a compressing unit and a body unit, wherein the body unit contains a mounting structure and a cavity for holding a septum, wherein the soft cannula is threaded on the mounting structure, wherein the compressing unit circumferentially surrounds the mounting structure and at least parts of the body unit and wherein the compressing unit contains an internal material tension induced by shrinking of the compression unit for exerting a compression force on the soft cannula and the mounting structure.

10. The cannula system according to claim 9, wherein only a distal end area of the soft cannula is threaded on the mounting structure and wherein the compressing unit circumferentially surrounds the distal end area of the soft cannula.

11. The cannula system according to claim 10, wherein the distal end area of the soft cannula comprises a locking structure providing a form lock and/or an adhesive bond between the soft cannula and the compressing unit.

12. The cannula system according to claim 10 or 11, wherein the locking structure includes at least one protrusion, preferably a collar arranged at the most distal part of the distal end area, protruding from the distal end area and/or at least one hole, preferably a through bore or a blind hole.

13. The cannula system according to any of claims 10 to 12, wherein distal end area of the soft cannula has a larger diameter than the rest of the soft cannula.

14. The cannula system according to any of claims 10 or 13, wherein the compressing unit compresses at least the distal end area of the soft cannula and/or wherein the body unit and the compressing unit are connected by a bonded connection and/or wherein the soft cannula and the compressing unit are connected by a bonded connection.

15. Use of the cannula system according to any of claims 9 to 14 in an infusion set.