CLAIMS

1. A method for fastening a stud to a substrate having a surface layer, comprising the following steps:

   a) providing a stud which has a stud diameter at an end side,

   b) providing an annular covering element having an inside diameter and an outside diameter,

   c) creating a recess in the substrate by removing, in particular machining, the surface layer from the substrate in a defined surface region having a surface diameter, wherein the surface diameter is greater than the stud diameter and less than the outside diameter,

   d) liquefying the end side and/or the substrate in the recess,

   e) allowing the end side or the substrate to solidify in the recess,

   f) contacting the end side with the substrate in the recess during solidification, and

   g) completely covering the recess around the stud by means of the covering element.

2. The method as claimed in claim 1, in which the end side and/or the covering element and/or the defined surface region are/is circular.

3. The method as claimed in either of the preceding claims, in which the recess is a blind hole.

4. The method as claimed in one of the preceding claims, in which the recess is drilled by means of a drilling tool.

5. The method as claimed in one of the preceding claims, in which the recess has a centering contour and the end side has a mating contour, wherein the centering contour and the mating contour engage in one another when the stud is placed at the desired position in the recess.

6. The method as claimed in claim 5, in which the centering contour is convex and the mating contour is concave.

7. The method as claimed in claim 5, in which the centering contour is concave and the mating contour is convex.

8. The method as claimed in claim 6, in which the mating contour comprises the entire end side.

9. The method as claimed in one of the preceding claims, in which the covering element comprises a sealing ring having a sealing ring inside diameter and a sealing ring outside diameter, wherein the sealing ring inside diameter is less than or equal to the stud diameter and the sealing ring outside diameter is greater than the surface diameter.

10. The method as claimed in one of the preceding claims, in which the covering element is fastened to the stud after steps d), e) and f) have been carried out.

11. The method as claimed in claim 10, in which the covering element is screwed or plugged onto the stud.

12. The method as claimed in one of claims 1 to 9, in which the covering element is premounted on the stud before steps d), e) and f) have been carried out.

13. The method as claimed in claim 12, in which, during step d), e) and/or f), the covering element is partially or completely liquefied and forms an integrally bonded connection with the stud and/or the substrate.

14. The method as claimed in claim 12, in which the covering element is deformed after steps d), e) and f) have been carried out.

15. The method as claimed in claim 12, in which the covering element is changed in its position on the stud after steps d), e) and f) have been carried out.

16. The method as claimed in claim 1, wherein the surface layer is formed as a protective layer, an oxide layer, or a dirt layer.

17. The method as claimed in claim 1, further comprising completely sealing a joint between the stud and the substrate from the surroundings by the covering element.