Claims

1. Tool arrangement with a screw-in tool (1) and a tool receiver (7), wherein the screw-in tool (1) has a thread (4) to engage in a counter thread (11) on the tool receiver (7), characterized in that the counter thread (11) and the thread (4) have different thread contours, which adapt to one another in the screwed state by elastic deformation.

2. Tool arrangement according to Claim 1, characterized in that the thread (4) and the counter thread (11) have different pitches.

3. Tool arrangement according to Claim 1, characterized in that the thread (4) and the counter thread (11) are designed as a conical inner thread and outer thread with different taper angles (α; β).

4. Tool arrangement according to Claim 3, characterized in that the taper angle (β) of the inner thread (11) is larger than the taper angle (α) of the outer thread (4).

5. Tool arrangement according to one of the preceding claims, characterized in that the thread (4) or the counter thread (11) is located on a threaded plug, and the thread (4) and/or the counter thread (11) contains a thread depth that declines to the end of the threaded plug.

6. Tool arrangement according to one of Claims 1-5, characterized in that the tool receiver (7) or the screw-in tool (1) contains an insert sleeve (I) in which the inner thread (11) is located.

7. Tool arrangement according to one of Claims 1-6, characterized in that on the screw-in tool (1) and the tool receiver (7), there is at least one support area (Y) which is formed by two conical contact surfaces (5, 8) or conical support surfaces (6, 9) with different taper angles.

8. Tool arrangement according to Claim 7, characterized in that the two conical contact surfaces (5, 8) or conical support surfaces (6, 9) are directly adjacent to one another.

9. Tool arrangement according to Claim 7 or 8, characterized in that the support area (Y) is formed by a first conical contact surface (5) or conical support surface (6) adjacent to the tool head (2), and a second conical contact surface (8) or a conical support surface (9).

10. Tool arrangement according to Claim 9, characterized in that the first conical contact surface (5) or support surface (6) has a taper angle of 170°, and the second conical contact surface (8) or support surface (9), a taper angle of 10°.

11. Tool arrangement according to one of Claims 7-10, characterized in that the diameter of the first conical contact surface (5) or the support surface (6) is increased or, preferably, decreased in the screw-in direction of the screw-in tool.

12. Tool arrangement according to one of the preceding claims, characterized in that another support area (Z) with another support surface (16) for the placement is provided on the screw-in tool and the tool receiver.

13. Tool arrangement according to Claim 12, characterized in that the additional contact surface (15) has an excess dimension in comparison to the additional support surface (16), and during the assembly of the screw-in tool (1) and the tool receiver (7), there is a pressing between the contact surface (15) and the support surface (16).

14. Tool arrangement according to Claim 12 or 13, characterized in that the additional support surface (16) and the additional contact surface (15) are designed as cylindrical, spherical, or conical support or contact surfaces.

15. Tool arrangement according to one of the preceding claims, characterized in that the thread (4) is designed as an inner or outer thread and, correspondingly, the counter thread (11), as an outer or inner thread.

16. Screw-in tool for a tool arrangement according to one of Claims 1-15.

17. Tool receiver for a tool arrangement according to one of Claims 1-15.

Claims

1. Tool arrangement with a screw-in tool (1) and a tool receiver (7), wherein the screw-in tool (1) has a thread (4) to engage in a counter thread (11) on the tool receiver (7), characterized in that the counter thread (11) and the thread (4) have different thread contours, which adapt to one another in the screwed state by elastic deformation, in which during screwing-in a pretension is produced over a part of the thread due to the elastic deformation of the threads and during tensioning a uniform wear pattern of the threads over the entire length is achieved.

2. Tool arrangement according to Claim 1, characterized in that the thread (4) and the counter thread (11) have different pitches.

3. Tool arrangement according to Claim 1, characterized in that the thread (4) and the counter thread (11) are designed as a conical inner thread and outer thread with different taper angles (α; β).

4. Tool arrangement according to Claim 3, characterized in that the taper angle (β) of the inner thread (11) is larger than the taper angle (α) of the outer thread (4).

5. Tool arrangement according to one of the preceding claims, characterized in that the thread (4) or the counter thread (11) is located on a threaded plug, and the thread (4) and/or the counter thread (11) contains a thread depth that declines to the end of the threaded plug.

6. Tool arrangement according to one of Claims 1-5, characterized in that the tool receiver (7) or the screw-in tool (1) contains an insert sleeve (I) in which the inner thread (11) is located.

7. Tool arrangement according to one of Claims 1-6, characterized in that on the screw-in tool (1) and the tool receiver (7), there is at least one support area (Y) which is formed by two conical contact surfaces (5, 8) or conical support surfaces (6, 9) with different taper angles.

8. Tool arrangement according to Claim 7, characterized in that the two conical contact surfaces (5, 8) or conical support surfaces (6, 9) are directly adjacent to one another.

9. Tool arrangement according to Claim 7 or 8, characterized in that the support area (Y) is formed by a first conical contact surface (5) or conical support surface (6) adjacent to the tool head (2), and a second conical contact surface (8) or a conical support surface (9).

10. Tool arrangement according to Claim 9, characterized in that the first conical contact surface (5) or support surface (6) has a taper angle of 170°, and the second conical contact surface (8) or support surface (9), a taper angle of 10°.

11. Tool arrangement according to one of Claims 7-10, characterized in that the diameter of the first conical contact surface (5) or the support surface (6) is increased or, preferably, decreased in the screw-in direction of the screw-in tool.

12. Tool arrangement according to Claims 7 to 11, characterized in that another support area (Z) with another support surface (16) for the placement is provided on the screw-in tool and the tool receiver.

13. Tool arrangement according to Claim 12, characterized in that the additional contact surface (15) has an excess dimension in comparison to the additional support surface (16), and during the assembly of the screw-in tool (1) and the tool receiver (7), there is a pressing between the contact surface (15) and the support surface (16).

14. Tool arrangement according to Claim 12 or 13, characterized in that the additional support surface (16) and the additional contact surface (15) are designed as cylindrical, spherical, or conical support or contact surfaces.

15. Tool arrangement according to one of the preceding claims, characterized in that the thread (4) is designed as an inner or outer thread and, correspondingly, the counter thread (11), as an outer or inner thread.

16. Screw-in tool for a tool arrangement according to one of Claims 1-15.

17. Tool receiver for a tool arrangement according to one of Claims 1-15.