

CLAIMS

1. Expansion anchor having
 - an anchor bolt (10),
 - an expansion sleeve (30) surrounding the anchor bolt (10), and
 - an expansion body (12) located in a front region of the anchor bolt (10), wherein the expansion body (12) has a converging zone (23) for expanding the expansion sleeve (30),characterized in that
 - the expansion body (12) has at least one expansion sleeve abutment wall (60) facing the expansion sleeve (30).
2. Expansion anchor according to claim 1,
characterized in that
the at least one expansion sleeve abutment wall (60) is for surmountably obstructing the expansion sleeve (30).
3. Expansion anchor according to one of the preceding claims,
characterized in that
the at least one expansion sleeve abutment wall (60) tapers towards the rear of the anchor bolt (10).
4. Expansion anchor according to one of the preceding claims,
characterized in that
the maximum slope ($\alpha_{\max}$) of the at least one expansion sleeve abutment wall (60), measured with respect to the longitudinal axis (99) of the anchor bolt (10), is greater than 30° and/or smaller than 80°.
5. Expansion anchor according to one of the preceding claims,
characterized in that
the at least one expansion sleeve abutment wall (60) has a maximum radial height (h_{60}) of at least 0.3 mm.

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6. Expansion anchor according to one of the preceding claims,
c h a r a c t e r i z e d in that
the at least one expansion sleeve abutment wall (60) is located at a distance (d_{60}) of at least $0,5 \cdot L_1$, preferably of at least $0,8 \cdot L_1$, from the rear end of the converging zone (23), wherein L_1 is the length of the converging zone (23).
7. Expansion anchor according to one of the preceding claims,
c h a r a c t e r i z e d in that
the expansion body (12) has, located in front of the converging zone (23), a transition zone (22),
wherein the at least one expansion sleeve abutment wall (60) is located within the transition zone (22).
8. Expansion anchor according to one of the preceding claims,
c h a r a c t e r i z e d in that
the expansion body (12) is provided with at least one abutment wall recess (66), wherein the at least one abutment wall recess (66) is limited by the at least one expansion sleeve abutment wall (60).
9. Expansion anchor according to claim 8,
c h a r a c t e r i z e d in that
the abutment wall recess (66) is an abutment wall recess (66) for receiving a section of the expansion sleeve (30).
10. Expansion anchor according to one of claims 8 or 9,
c h a r a c t e r i z e d in that
the expansion sleeve (30) has at least one slit (36), originating from the front end of the expansion sleeve (30),
wherein the at least one slit (36) is located in a position where it at least partly overlaps the at least one abutment wall recess (66) or can at least be brought into this position by rotating the expansion sleeve (30) around to the anchor bolt (10).
11. Expansion anchor according to one of claims 8 to 10,
c h a r a c t e r i z e d in that
the expansion body (12) has an arcuate cross-section adjacent to the at least one abutment wall recess (66).

12. Expansion anchor according to one of the preceding claims,
c h a r a c t e r i z e d in that
the at least one expansion sleeve abutment wall (60) has a maximum angular width ($\theta_{\max}$), measured at the longitudinal axis (99) of the anchor bolt (10) in a plane perpendicular to the longitudinal axis (99) of the anchor bolt (10), that is greater than 50° , preferably greater than 60° , and/or smaller than 90° , preferably smaller than 80° .
13. Expansion anchor according to one of the preceding claims,
c h a r a c t e r i z e d in that
the expansion body (12) has a plurality of expansion sleeve abutment walls (60).
14. Expansion anchor according to claim 13,
c h a r a c t e r i z e d in that
the expansion sleeve abutment walls (60) are arranged abreast.
15. Expansion anchor according to one of claims 13 or 14,
c h a r a c t e r i z e d in
that the expansion sleeve abutment walls (60) span, in total, minimum 120° , minimum 140° or minimum 160° of the expansion body (12), and/or
that the expansion sleeve abutment walls (60) span, in total, maximum 280° or maximum 250° of the expansion body (12).
16. Expansion anchor according to one of claims 13 to 15,
c h a r a c t e r i z e d in that
the expansion body (12) has maximum 8, preferably maximum 6, particularly preferably maximum 4 expansion sleeve abutment walls (60).
17. Expansion anchor according to one of claims 13 to 16,
c h a r a c t e r i z e d in that
the expansion body (12) is provided with a plurality of abutment wall recesses (66), wherein each abutment wall recess (66) is limited by one of the expansion sleeve abutment walls (60), wherein
the plurality of abutment wall recesses (66) cover 20% to 70%, preferably 40% to 45%, of the lateral surface of the expansion body (12).

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18. Expansion anchor according to one of claims 13 to 17,
c h a r a c t e r i z e d in that
the expansion sleeve abutment walls (60) are arranged in a symmetric manner,
the expansion sleeve abutment walls (60) are arranged equidistantly around the expansion body (12), and/or
the expansion sleeve abutment walls (60) all have equal widths.
19. Expansion anchor according to one of the preceding claims,
c h a r a c t e r i z e d in that
the maximum thickness (t_{30}) of the expansion sleeve (30) is between 0.75mm and 3.5mm, and/or
the converging zone (23) has an apex angle (β) between 10° and 40° .
20. Method for using an expansion anchor according to one of the preceding claims, in which
 - the expansion sleeve (30) is moved forwards relative to the expansion body (12), wherein the expansion sleeve (30) hits the at least one expansion sleeve abutment wall (60).
21. Method according to claim 20,
c h a r a c t e r i z e d in that
 - the expansion sleeve (30) is moved forwards relative to the expansion body (12), wherein the expansion sleeve (30) hits the at least one expansion sleeve abutment wall (60) and subsequently overcomes the at least one expansion sleeve abutment wall (60).
22. Method according to claims 20 or 21,
c h a r a c t e r i z e d in that
 - the expansion sleeve (30) is moved forwards relative to the expansion body (12), wherein a region of the expansion sleeve (30) is inserted into at least one abutment wall recess (66).