Claims

1. A side plate (10; 30A, 30B) for an energy guide chain for guiding lines using chain links which comprise two opposing side plates which are connected together via at least one crosspiece, wherein the side plate (10; 30A, 30B) has a one-piece plate body of plastics material with two overlap regions (11A, 11B; 31A-31D), in each case for swivelable connection to a corresponding overlap region of an adjoining plate, and a central region (12; 32A, 32B) between the overlap regions; and wherein the overlap regions and the central region have a number of cross-sectional transitions, in each case between two outer subsurfaces, at least one cross-sectional transition of which between a first subsurface (F11, F21, F31) of the plate body and a second subsurface (F12, F22, F32) extending at an angle, in particular an angle 90°, to said first subsurface, is rounded or chamfered (Q1-Q5); wherein the at least one cross-sectional transition (Q1-Q5) is delimited by an envelope transition curve (C) with a course such that, for a starting point (PA) of the transition curve (C) at the first subsurface (F11, F21, F31), which is located at a distance A from ~~the~~ an intersection curve of the first subsurface with second subsurface, ~~the~~ an endpoint (PZ) of the transition curve (C) at the second subsurface (F12, F22, F32) is located at a distance Z from said intersection curve, with $1.7 \cdot A \leq Z \leq 4.0 \cdot A$, in particular with $2.3 \cdot A \leq Z \leq 3.4 \cdot A$, and such that ~~the~~ a cross-sectional area of the cross-sectional transition (Q1-Q5) decreases continuously along the transition curve (C) from the starting point (PA) to the endpoint (PZ).

2. The side plate according to Claim 1, characterized in that the transition curve (C) corresponds to a smooth or stepless and strictly monotonically falling curve.

3. The side plate according to one of Claims 1 to 2, characterized in that the first subsurface (F11, F21, F31) is located perpendicular to ~~the~~ a main plane of the side plate and the second subsurface is located parallel (F12, F22, F32) to the main plane (H) of the plate body.

4. The side plate according to Claim 3, characterized in that the first subsurface with the starting point (PA) is located on the central region (12; 32A, 32B) and the second subsurface with the endpoint (PZ) on one of the two ~~an~~ overlap regions (11A, 11B; 31A-31D).

5. The side plate according to Claim 3, characterized in that the first subsurface (F31) with the starting point (PA) corresponds to a stop surface with a limit stop effect of a stop recess (15A, 15B) in one of the two ~~an~~ overlap regions and the second subsurface (F32) with the endpoint (PZ) corresponds to a bottom wall which closes the stop recess (15A, 15B) on one side.

6. The side plate according to Claim 3, characterized in that the first subsurface with the starting point is located on a swivel pin in the overlap region and the second subsurface with the endpoint is located on a sidewall region from which the swivel pin protrudes.

7. The side plate according to one of Claims 1 to 3, characterized in that the transition curve (C) defines the cross-sectional transition (Q5) from an outer surface of the plate body into a material recess (37A, 37B).

8. The side plate according to one of the preceding claims, in particular Claim 2, characterized in that the course

of the transition curve (C) is selected such that the endpoint is located at a distance Z from the intersection curve with $2.2 \cdot A \leq Z \leq 2.6 \cdot A$, and the course in particular corresponds to a 45° circle segment of a circle which tangentially touches the second subsurface (F12, F22, F32) in the endpoint (PZ).

9. The side plate according to one of the preceding claims, characterized in that the angle between the first outer subsurface (F11, F21, F31) and the second outer subsurface (F12, F22, F32) of the plate body amounts to a constant 90° along the cross-sectional transition, and
- in that the course of the transition curve (C) in ~~the~~ an initial portion at the starting point (PA) has a tangent which forms an angle of ~~approx.~~ 45° ±5° with the first outer subsurface (F11, F21, F31); and/or
- in that the course of the transition curve in ~~the~~ an end portion at the endpoint (PZ) has a tangent which is substantially parallel to the second outer subsurface or continuously merges into it.

10. The side plate according to one of the preceding claims, characterized in that the at least one cross-sectional transition (Q1-Q5) is asymmetric to ~~the~~ a bisector of the first and second sub-surfaces and/or is produced in one piece with the plate body from a thermoplastic, in particular by ~~the~~ an injection molding method.

11. The side plate according to one of the preceding claims, characterized in that the second subsurface (F12, F22, F32) with the endpoint (PZ) of the transition curve (C) is provided at a region of the plate body which is intended to transmit at least tensile force.

12. The side plate according to one of the preceding claims, characterized in that ~~it~~ the side plate takes the form of

an inner plate (30A), an outer plate (30B) or an offset plate (10).

13. A chain link of an energy guide chain having two opposing side plates (10; 30A, 30B) according to one of the preceding claims.

14. An energy guide chain comprising two strings of plates which in each case consist of side plates (10; 30A, 30B) according to one of preceding claims 1 to 12 which are joined together swivelably in ~~the~~ a longitudinal direction.