**Patent claims**

1. A method for producing x-ray markers, wherein at least one region of a material layer forming the x-ray marker to be produced is pre-cut, such that said region is connected via at least one web, which forms a predetermined breaking point, to a part of the material layer surrounding the region,

   wherein the predetermined breaking point is arranged in a section of the region such that the predetermined breaking point lies further inward in an extension direction of the web than two edge portions of the region between which the section is disposed, wherein the predetermined breaking point is severed in order to detach the x-ray marker from said part of the material layer.

2. The method according to claim 1, wherein the material layer is a metal foil or a metal tube made of radiopaque metal.

3. The method according to any one of the preceding claims, wherein a width of the web perpendicularly to the extension direction is pre-cut in a range of from 1 µm to 20 µm.

4. The method according to any one of the preceding claims, wherein during the pre-cutting, a gap surrounding the region is produced and in particular has a width ranging from 10 µm to 100 µm.

5. The method according to any one of the preceding claims, wherein the material layer together with the pre-cut region is contacted with an acid, such that a burr produced during the pre-cutting at the region is reduced, in particular is polished.

6. The method according to claim 6, wherein the material layer treated with the acid is rinsed together with the pre-cut region after the contacting with the acid.

7. The method according to any one of the preceding claims, wherein an outer surface of the region connected to the material layer is passivated for protection against corrosion, in particular by one of the following measures:

- oxidation of the surface, wherein in particular the oxidation is a plasma-chemical oxidation, which in particular is carried out in an electrolyte; or
- coating with a dielectric layer, wherein in particular a gas-phase deposition produces thin silicon oxide layers; or
- contacting of the surface with an aqueous silicate mixture for producing an electrically insulating layer on the surface, wherein said layer comprises sodium silicates; or
- application of a complete layer of parylene.

8. The method according to claim 7, wherein the region, in particular after the passivation, is separated from the part of the material layer surrounding the region, in particular by one of the following measures:
   - by the oxidation performed for passivation, wherein the predetermined breaking point is fully oxidised and is thus severed; or
   - by vibrating the predetermined breaking point, in particular by exposing the predetermined breaking point to ultrasonic waves.

9. An x-ray marker, wherein the x-ray marker has a section including a web extended along an extension direction,
a contact face which is formed at a breaking point when the web is severed in order to produce the x-ray marker, and
wherein the contact face lies further inward in the extension direction of the web than two edge portions of the x-ray marker between which the section is disposed.

10. The x-ray marker according to claim 9, wherein the marker has an oxide or silicate layer with a thickness of more than 0.5 µm.

11. A semifinished product for producing an x-ray marker, in particular an x-ray marker according to claims 9 or 10, wherein the semifinished product is formed by a material layer, into which at least one region of the material layer forming the x-ray marker to be produced is pre-cut, such that said region is connected via a web, which is extended

along an extension direction and forms a predetermined breaking point, to the part of the material layer surrounding the region,

wherein the predetermined breaking point is arranged in a section of the region so that the predetermined breaking point lies further inward in the extension direction of the web than two edge portions of the region between which the section is disposed.

12. The semifinished product according to claim 11, wherein a width of the web perpendicular to the extension direction lies in the range of from 1 µm to 20 µm.

13. A medical implant, in particular in the form of a framework, wherein the medical implant comprises at least one x-ray marker according to any one of claims 9 to 10.