Claims:

1. Metallic solid projectile for practice cartridges, in particular for use on preferably police shooting ranges, wherein the solid projectile comprises an ogival portion at the front side and a cylinder portion for holding the solid projectile in a cartridge case and defines a projectile length in the axial direction,

   wherein the ogival portion comprises an ogival wall and a rotationally symmetrical ogival cavity circumferentially bounded by the ogival wall,

   wherein a fully cylindrical stem portion of the solid projectile extends in the axial direction over less than 45% of the projectile length,

   wherein starting from a bottom of the ogival cavity, a shaft extends into the cylinder portion, which shaft forms a microchannel and/or a deformation cavity, and

   wherein when the shaft forms a deformation cavity, the deformation cavity is shaped at least in sections to be cylindrical and/or at least in sections to be conical with a taper at the front side.

2. Solid projectile according to claim 1, characterized in that the ogival wall has an ogival wall thickness and the solid projectile forms an annular deformation sleeve wall in the cylinder portion in the axial direction at least in sections, which has a deformation sleeve wall thickness which is greater than the ogival wall thickness, preferably the ogival wall thickness being less than half the radius of the solid projectile and/or preferably the deformation sleeve wall thickness being less than or equal to the radius of the solid projectile.

3. Solid projectile according to claims 1 or 2, characterized in that the solid projectile is blunt at the front side and/or has an opening at the front side which opens into the ogive cavity and has an inner opening diameter which is greater than 0.5 mm, in particular greater than 1.0 mm, and/or is smaller than 3 mm, in particular smaller than 1.5 mm.

4. Solid projectile according to one of the preceding claims, characterized in that the fully cylindrical stem portion extends in the axial direction over less than 3 mm, less than 2 mm or less than 1 mm and/or that a calotte is recessed at the rear end of the solid projectile.

5. Solid projectile according to one of the preceding claims, characterized in that an inner contour surrounding the ogival cavity is completely rounded in the axial direction, preferably formed step-free and/or has exclusively rounded edges.

6. Tool arrangement for producing metallic solid projectiles for practice cartridges, preferably with a rotationally symmetrical ogival cavity, comprising a preform press having
an inner contour forming press having a hollow cylindrical projectile blank receptacle which is bounded in the axial direction by a bottom side,
a preform punch, having a preform section which tapers in the axial direction relative to a front surface, preferably at least in sections conically, in particular in the form of a truncated cone, and in particular rotationally symmetrical, the preform portion being movable relative to the bottom side for forming a projectile blank to a preform end position in which the preform punch, the bottom side and the projectile blank receptacle define a preform cavity for the projectile blank,
wherein in the preform end position, an axial distance between the bottom side and the front surface is less than 45% of a maximum height of the cavity in the axial direction, and
wherein the tool arrangement further comprises an inner contour forming press having
a hollow cylindrical projectile blank receptacle which is bounded in the axial direction by a bottom side, and
an inner contour forming punch comprising an inner contour forming portion extending axially to a front surface, said inner contour forming portion being movable relative to the bottom side for forming the projectile blank to an inner contour forming end position, wherein said inner contour forming punch, said bottom side and said projectile blank receptacle define an inner contour forming cavity for said projectile blank,
wherein, in the inner contour form end position, an axial distance between the bottom side and the front surface is greater than the axial distance between the bottom side of the preform press and the front surface of the preform punch in the preform end position.

7. Tool arrangement according to claim 6, characterized in that the front surface of the inner contour forming punch is formed as a blunt cone tip, in particular with a rounded front edge tip, and/or the inner contour forming portion is formed in sections in the axial direction as a sleeve forming section with an essentially cylindrical outer contour, in particular the inner contour forming portion having

adjacent to a guide portion of the inner contour forming punch a frustoconical transition portion extending radially from the inner contour forming portion to the guide portion.

8. Tool arrangement according to claims 6 or 7, characterized in that the tool arrangement further comprises a setting press having a hollow cylindrical metal blank receptacle bounded in axial direction by a bottom side and having a setting punch, which is movable relative to the bottom side for forming the metal blank up to a setting end position, in which the setting punch and the projectile blank receptacle form a setting cavity with a predetermined clear width for defining a constant outer diameter, in particular the caliber diameter, of the metal blank.

9. Tool arrangement according to one of claims 6 to 8, characterized in that the tool arrangement further comprises an ogival forming press which has a hollow cylindrical projectile receptacle which is bounded in the axial direction by a concave, ogival-shaped bottom side and which has a projectile rear punch for holding and/or centering the rear end of an internally contour-shaped projectile blank, which is movable relative to the bottom side for forming the solid projectile to an ogival shape end position, in which the projectile rear punch, the projectile receptacle and the bottom side define a cavity defining a projectile negative with an ogival portion and a cylinder portion adjacent thereto.

10. Method for producing metallic solid projectiles for practice cartridges, preferably with a rotationally symmetrical ogive cavity, in which

a metal blank formed in particular from cut-to-length metal wire is provided, preferably with a cylindrical outer surface,

wherein, in a preforming step, the metal blank is formed into a projectile blank with a sleeve-shaped portion which, at the end of the preforming step, extends over more than half of the greatest axial blank height, in particular the sleeve-shaped portion being formed with a preferably continuously tapering inner contour, the projectile blank is deformed after the preforming step in an inner contour forming step in such a manner,

that a front-side sleeve portion of the projectile blank is formed with a radially outer sleeve wall of substantially constant wall thickness and/or cylindrical inner contour,

that a rear-side sleeve portion of the projectile blank is formed with a shoulder projecting radially inwards from the sleeve wall, and

that a shaft starting from the shoulder is formed which extends into the rear-side sleeve portion of the projectile blank.

11. Method according to claim 10, characterized in that the metal blank is formed in the preforming step while maintaining a remaining fully-cylindrical stem portion of a projectile blank extending in the axial direction over less than 45% of the greatest axial blank height, or in that the metal blank is completely penetrated in the axial direction in the preforming step for forming the projectile blank.

12. Method according to claim 10 or 11, characterized in that the shaft forms a microchannel and/or a deformation cavity,

wherein when the shaft forms a deformation cavity, the deformation cavity is formed at least sectionally cylindrically and/or at least sectionally conically with taper at the end.

13. Method according to claim 12, characterized in that in the inner contour forming step the projectile blank is being formed in such a way, that the deformation cavity forms a waist-shaped constriction at the front side, wherein the microchannel is formed between the deformation cavity and the shoulder, in which microchannel the inner wall surface of the sleeve section is brought together flat in particular in contact, and/or that a distance in the axial direction between the shoulder and a rear becomes

greater than the axial height of the fully cylindrical stem portion of the projectile blank which may be present at the end of the preforming step.

14. Method according to one of the claims 10 to 13, characterized in that the projectile blank, after the inner contour forming step, is formed in an ogival forming step in such a way that the front side sleeve wall forms an ogival outer surface in sections, an opening being maintained at the front side which preferably opens into an ogival cavity defined circumferentially by the sleeve wall.

15. Method according to one of the claims 10 to 14, characterized in that the preforming step, the inner contour forming step and/or the ogival forming step are carried out without cutting, in particular by cold forming, preferably by pressing.