CLAIMS

1. A method of embedding one or more fibers in a matrix, the method comprising:
   forming the one or more fibers using a fiber extruding tool of an apparatus;
   arranging the one or more fibers using one or more physical guides and/ or anchors; and
   depositing matrix material over the one or more fibers using a matrix material extruding tool of the apparatus, thereby embedding the one or more fibers in the matrix formed from the matrix material,
   wherein the one or more physical guides and/or anchors comprise a weave template with a plurality of poles, and
   wherein a pole of the plurality of poles is used as an anchor point to fix an end of a fiber of the one or more fibers by coiling the fiber around the pole with a minimum of three full revolutions, the fiber of the one or more fibers being kept in tension between the pole and a further pole of the plurality of poles.

2. The method according to claim 1,
   wherein the further pole is used as a nodal point to change a direction of the fiber of the one or more fibers.

3. The method according to claim 1 or claim 2,
   wherein the weave template is formed by fused deposition modelling (FDM).

4. The method according to any one of claims 1 to 3, further comprising:
   forming a first mold part defined by a bottom mold before forming the one or more fibers;
   wherein the one or more fibers are arranged on the first mold part; and
   wherein the matrix is a second mold part defined by a top mold so that the one or more fibers are between the first mold part and the second mold part.

5. The method according to claim 1,

wherein the one or more physical guides and/or anchors comprise a sheet template with a plurality of line cuts or holes along one or more edges of the sheet template.

6. The method according to claim 5,

wherein a line cut or hole of the plurality of line cuts or holes is used as an anchor point to fix an end of a fiber of the one or more fibers.

7. The method according to claim 5,

wherein a line cut or hole of the plurality of line cuts or holes is used as a nodal point to change a direction of a fiber of the one or more fibers.

8. The method according to any one of claims 5 to 7,

wherein the plurality of line cuts or holes is formed by using a laser cutter.

9. The method according to claim 1,

wherein the one or more physical guides and/or anchors comprise polymer guides printed as new parts or onto an existing surface or an object.

10. The method according to claim 9,

wherein arranging the one or more fibers comprises layering the one or more fibers between or inside the guides using a needle and/or a co-axial needle.

11. The method according to any one of claims 1 to 10,

wherein depositing the matrix material over the fibers comprises pouring the matrix material over the one or more fibers after arranging the fibers or while arranging the fibers.

12. The method according to any one of claims 1 to 10,

wherein depositing the matrix material over the fibers comprises printing the matrix material layer by layer using direct ink writing (DIW).

13. The method according to any one of claims 1 to 12, further comprising:

heating the matrix material after depositing the matrix material to form the matrix.

14. A setup for embedding one or more fibers in a matrix, the setup comprising:

an apparatus comprising a fiber extruding tool configured to form the one or more fibers;

one or more physical guides and/or anchors used for arranging the one or more fibers;

wherein the apparatus further comprises a matrix material extruding tool configured to deposit matrix material over the one or more fibers, thereby embedding the one or more fibers in the matrix formed from the matrix material,

wherein the one or more physical guides and/or anchors comprise a weave template with a plurality of poles, and

wherein a pole of the plurality of poles is used as an anchor point to fix an end of a fiber of the one or more fibers by coiling the fiber around the pole of the plurality of poles with a minimum of three full revolutions, the fiber of the one or more fibers being kept in tension between the pole and a further pole of the plurality of poles.