Claims

1. A core assembly for moulding, the core assembly comprising:

a plurality of separable rigid parts configured to be joined together to form a hollow channel therebetween; and

at least one insert configured to be removably insertable into the hollow channel and further configured to bear against at least two of the plurality of separable rigid parts so as to maintain the plurality of separable rigid parts in respective positions in an assembled state of the core assembly with a gap between the at least two of the plurality of separable rigid parts,

wherein an exterior surface of the core assembly in the assembled state forms a moulding surface; and

wherein the plurality of separable rigid parts are further configured to be collapsible into the hollow channel when the at least one insert is removed from the hollow channel, by the at least two of the plurality of separable rigid parts being moveable towards each other because of the gap therebetween for disassembly of the core assembly.

2. The core assembly as claimed in claim 1, wherein the plurality of separable rigid parts are configured to be joined to each other in a manner that prevents the respective rigid parts from breaking apart radially away from the hollow channel.

3. The core assembly as claimed in claim 2, wherein the plurality of separable rigid parts are configured to be joined to each other via a tongue and groove joint or a lap joint or a magnetic joint or a temporary adhesive joint or any combination thereof.

4. The core assembly as claimed in any one of claims 1 to 3, wherein the at least one insert comprises at least one ball or sphere or bearing, or at least one inflatable air bag.

5. The core assembly as claimed in any one of claims 1 to 4, wherein the core assembly comprises two or more inserts.

6. The core assembly as claimed in claim 5, wherein the two or more inserts are stringed together.

7. The core assembly as claimed in any one of claims 1 to 6, wherein the hollow channel comprises a circular cross-section.

8. The core assembly as claimed in any one of claims 1 to 7, wherein the hollow channel extend through an entire length of the core assembly in the assembled state.

9. The core assembly as claimed in any one of claims 1 to 8, wherein two or more hollow channels are formed in the core assembly in the assembled state.

10. The core assembly as claimed in any one of claims 1 to 9, wherein the plurality of separable rigid parts is manufactured via additive manufacturing.

11. The core assembly as claimed in any one of claims 1 to 10, wherein the exterior surface of the core assembly in the assembled state defines a predetermined inner surface of a cavity of a workpiece to be moulded.

12. A method of moulding, the method comprising:

providing a plurality of separable rigid parts configured to be joined together to form a hollow channel therebetween and at least one insert; and

removably inserting the at least one insert into the hollow channel to bear against at least two of the plurality of separable rigid parts so as to maintain the plurality of separable rigid parts in respective positions in an assembled state of the core assemblywith a gap between the at least two of the plurality of separable rigid parts ,

wherein an exterior surface of the core assembly in the assembled state forms a moulding surface; and

removing the at least one insert from the hollow channel when the moulding is completed and collapsing the plurality of separable rigid parts into the hollow channel by the at least two of the plurality of separable rigid parts moving towards each other closing the gap therebetween so as to be detached from a finished workpiece for removal of the plurality of separable rigid parts from the finished workpiece.

13. The method as claimed in claim 12, further comprising applying a layer of materials on the moulding surface of the core assembly in the assembled state.

14. The method as claimed in claim 12 or 13, comprising removing the plurality of separable rigid parts piece by piece from the finished workpiece.

15. The method as claimed in claim 13, wherein the layer of materials comprises a layer of fiber and resin matrix.