corrected for the high demands on the micro-injection moulded article, can thus only take place in the opened state of the mould. An alignment error of the mould or the insert/inserts can again occur during or after the closing of the mould. In particular, series production of injection moulded articles with the same mould or the same insert/inserts for the injection moulding cannot therefore be carried out sufficiently precisely.

Embodiments of the present invention disclose a device and a method, which at least partially, in particular completely, overcome the drawbacks of the prior art. Embodiments of the present invention disclose an improved device for injection moulding and an improved method for injection moulding.

In particular, embodiments of the present invention disclose a device and a method with which the production precision of the produced components or injection moulded articles is increased.

All combinations of at least two features specified in the description, in the claims and/or the drawings also fall within the scope of the invention. In the stated value ranges, values lying within the stated limits should also be deemed to be disclosed as limiting values and can be claimed in any combination.

According to a first aspect of the present invention, there is provided a device for injection moulding, in particular for micro-injection moulding, at least including: a mould with a first mould half and a second mould half, wherein the first mould half and the second mould half define an injection moulding space in the closed state of the mould, and at least one insert arranged in the injection moulding space, wherein the at least one insert comprises at least partially a polymer, wherein with the device an injection moulded article can be produced, wherein the injection moulded article can be removed from the at least one insert and measured, wherein an alignment error can be determined by comparison with set values, wherein the at least one insert can be aligned, comprising at least one further insert arranged in the injection moulding space, wherein the at least one insert and/or the at least one further insert can be aligned in the closed state of the mould, wherein the alignment error can be iteratively improved by repeatedly carrying out the alignment.

The mould comprises at least one insert, which comprises at least partially a polymer. The device can also comprise two inserts or more, which at least partially comprise a polymer.

The at least one insert can preferably be aligned, in particular with a further insert, in the closed state of the mould.

According to a second aspect of the present invention, there is provided a method for injection moulding, in particular micro-injection moulding, wherein an injection moulding space is defined by a mould with a first mould half and a second mould half in the closed state of the mould, wherein at least one insert arranged in the injection moulding space at least partially comprises a polymer, wherein an injection moulded article is produced, wherein the injection moulded article is removed from the at least one insert and measured, wherein an alignment error is determined by comparison with set values, wherein the at least one insert is aligned, wherein the at least one insert and at least one further insert arranged in the injection moulding space, in particular a moulding surface of the at least one insert and/or a moulding surface of the at least one further insert, are aligned with one another in the closed state of the mould in the injection moulding space, wherein the alignment error is iteratively improved by repeatedly carrying out the alignment.

Two or more inserts can also be arranged in the injection moulding space, which are at least partially comprise a polymer.

The at least one insert is preferably aligned in the closed state of the mould, in particular with a further insert.