

CHIP PACKAGE MOLD CHASE

BACKGROUND OF THE INVENTION

5 **1. Field of the Invention**

[0001] The present invention generally relates to a chip package mold chase, and more particularly, to a chip package mold chase able to make the area of a carrier be effectively used and avoid the carrier layout from being restricted.

2. Description of Related Art

10 [0002] In terms of an IC package, usually, a carrier with disposed chips is placed between a plurality of mold chases. Then, the mold chases are combined to define a cavity, and the carrier with the chips is located in the cavity. After that, a molding compound material is injected into the cavity through a pin gate of the mold chase. Finally, the mold chase is removed to finish a well-known chip package structure.

15 [0003] A method to inject the molding compound material into the cavity is through the pin gate located in an upper mold chase. The formed chip package structure includes the carrier, the chip disposed on the carrier and a molding compound enclosing the carrier and the chip.

[0004] The above-mentioned upper mold chase used in the molding compound injecting
20 process commonly has a plurality of molding compound injecting units with the same design. Each molding compound injecting unit includes a pot and a plurality of runners with the same dimension and the quantity connected to the pot, wherein each runner has a same quantity of pin gates. During the molding compound injecting process, a plunger is

used to press the melted molding compound material into all the pots of the upper mold chase. Then, the molding compound material in the pots flows through the pin gates along the runners connected to the pots and is injected into the cavities. After curing the molding compound material, the encapsulant is formed.

5 [0005] In the above-mentioned molding compound injecting unit, there are usually a plurality of runners disposed symmetrically at both sides of the pot, and both sides of the molding compound injecting unit respectively have a same quantity of runners. Thus, the molding compound injecting unit has even runners so that during the molding compound injecting process it can avoid the uneven flow velocity of the molding compound material
10 caused by uneven molding compound injecting pressures. As a result, the yield of the chip packaging process is advanced. However, when the carrier has a prime number lines of chips thereon (for example, 11 lines, 13 lines, 17 lines, and the like) and the characteristic of the molding compound is considered, the above-mentioned mold chase is unable to be used for the molding compound process. For example, when the carrier has
15 13 lines of chips thereon and the upper mold chase has six molding compound injecting units (each molding compound injecting unit has two lines of runners), the packaging process is conducted only on 12 lines of chips on the carrier, which wastes a part of carriers or chips and restricts the layout of the carriers.

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SUMMARY OF THE INVENTION

[0006] The present invention provides a chip package mold chase, which includes a first mold chase and a second mold chase disposed oppositely to each other. After the first mold chase and the second mold chase are combined, cavities are formed for respectively

accommodating a carrier and a chip disposed on the carrier. The second mold chase includes a plurality of molding compound injecting units. The molding compound injecting units include at least a first molding compound injecting unit and a second molding compound injecting unit. The first molding compound injecting unit and the second molding compound injecting unit respectively include a pot and a plurality of runners connected to the pot, wherein each runner has a plurality of pin gates and each pin gate is connected to a corresponding cavity. The molding compound material is injected into each cavity through the pots, the runners and the pin gates and encloses the carrier and the chip so as to form a plurality of chip package structures, wherein the volume of the molding compound material accommodated by the first molding compound injecting unit is substantially equal to the volume of the molding compound material accommodated by the second molding compound injecting unit, and the quantity of the chip package structures formed by the first molding compound injecting unit is greater than the quantity of the chip package structures formed by the second molding compound injecting unit.

[0007] According to the chip package mold chase depicted by the embodiment of the present invention, the quantity of the runners of the first molding compound injecting unit is, for example, greater than the quantity of the runners of the second molding compound injecting unit.

[0008] According to the chip package mold chase depicted by the embodiment of the present invention, the width of the runners of the first molding compound injecting unit is, for example, less than the width of the runners of the second molding compound injecting unit.

[0009] According to the chip package mold chase depicted by the embodiment of the

present invention, the depth of the runners of the first molding compound injecting unit is, for example, less than the depth of the runners of the second molding compound injecting unit.

[0010] According to the chip package mold chase depicted by the embodiment of the present invention, the volume of the pot of the above-mentioned first molding compound injecting unit is, for example, less than the volume of the pot of the second molding compound injecting unit.

[0011] According to the chip package mold chase depicted by the embodiment of the present invention, the above-mentioned second molding compound injecting unit further includes a buffer pot connected to the pot of the second molding compound injecting unit.

[0012] According to the chip package mold chase depicted by the embodiment of the present invention, in at least a molding compound injecting unit, the total volume of the molding compound materials accommodated by the runners located at a side of the pot is, for example, substantially the same as the total volume of the molding compound materials accommodated by the runners located at the opposite side of the pot, and the quantity of the chip package structures located at the side of the pot is, for example, greater than the quantity of the chip package structures located at the opposite side of the pot.

[0013] According to the chip package mold chase depicted by the embodiment of the present invention, in the molding compound injecting unit, the quantity of the runners located at a side of the pot is, for example, greater than the quantity of the runners located at the opposite side of the pot.

[0014] According to the chip package mold chase depicted by the embodiment of the present invention, in the molding compound injecting unit, the width of the runners located

at a side of the pot is, for example, less than the width of the runners located at the opposite side of the pot.

[0015] According to the chip package mold chase depicted by the embodiment of the present invention, in the molding compound injecting unit, the depth of the runners located at a side of the pot is, for example, less than the depth of the runners located at the opposite side of the pot.

[0016] The present invention also provides a chip package mold chase, which includes a first mold chase and a second mold chase disposed oppositely to each other. After the first mold chase and the second mold chase are combined, plural cavities are formed for respectively accommodating a carrier and a chip disposed on the carrier. The second mold chase includes a plurality of molding compound injecting units. Each molding compound injecting unit includes a pot and a plurality of runners connected to the pot, wherein each runner has a plurality of pin gates and each pin gate is connected to a corresponding cavity. The molding compound material is injected into each cavity through the pots, the runners and the pin gates and encloses the carrier and the chip so as to form a plurality of chip package structures, wherein in at least one of the molding compound injecting units, the total volume of the molding compound materials accommodated by the runners at a side of the pot is substantially the same as the total volume of the molding compound materials accommodated by the runners at the opposite side of the pot, and the quantity of the chip package structures located at the side of the pot is greater than the quantity of the chip package structures located at the opposite side of the pot.

[0017] According to the chip package mold chase depicted by the embodiment of the

present invention, in at least one of the molding compound injecting units, the quantity of the runners located at a side of the pot is, for example, greater than the quantity of the runners located at the opposite side of the pot.

[0018] According to the chip package mold chase depicted by the embodiment of the present invention, in at least one of the molding compound injecting units, the width of the runners located at a side of the pot is, for example, less than the width of the runners located at the opposite side of the pot.

[0019] According to the chip package mold chase depicted by the embodiment of the present invention, in at least one of the molding compound injecting units, the depth of the runners located at a side of the pot is, for example, less than the depth of the runners located at the opposite side of the pot.

[0020] Based on the depiction above, by means of adjusting the quantity of the molding compound injecting units in the mold chase, the type of the molding compound injecting unit, the dimension of the runners, the dimension of the pot or disposing a buffer pot, and making the volume of the molding compound material accommodated by each molding compound injecting unit substantially equal to each other, and making the total volume of the molding compound materials accommodated by the runners located at the side of the pot substantially equal to the total volume of the molding compound materials accommodated by the runners located at the opposite side of the pot, the present invention can increase the quantity of the runners in the limited using space of the mold chase, which is advantageous in avoiding wasting the using area of the carrier and avoiding the layout of the carrier from being restricted.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] The accompanying drawings are included to provide a further understanding of the invention, and are incorporated in and constitute a part of this specification. The drawings illustrate embodiments of the invention and, together with the description, serve to explain the principles of the invention.

[0022] Fig. 1 is a diagram of a chip package mold chase and the formed chip package structure according to an embodiment of the present invention

[0023] Fig. 2 is a diagram of a structure made by molding obtained after curing the molding compound material according to an embodiment of the present invention.

[0024] Fig. 3 is a diagram of an upper mold chase in a chip package mold chase according to an embodiment of the present invention.

[0025] Fig. 4 is a diagram of an upper mold chase in a chip package mold chase according to another embodiment of the present invention.

[0026] Fig. 5 is a diagram of a molding compound injecting unit according to an embodiment of the present invention.

[0027] Fig. 6 is a diagram of an upper mold chase in a chip package mold chase according to further an embodiment of the present invention.

[0028] Fig. 7 is a diagram of a structure made by molding obtained after curing the molding compound material according to another embodiment of the present invention.

DESCRIPTION OF THE EMBODIMENTS

[0029] Reference will now be made in detail to the present preferred embodiments of the invention, examples of which are illustrated in the accompanying drawings. Wherever

possible, the same reference numbers are used in the drawings and the description to refer to the same or like parts.

[0030] The chip package mold chase and the formed chip package structure can refer to Fig. 1. Fig. 1 is a diagram of a chip package mold chase and the formed chip package structure according to an embodiment of the present invention. In general speaking, chips are disposed on a carrier in an array, wherein the dimension of each chip is the same, thus, the cavities for accommodating the chips have the same dimension. For better showing, in Fig. 1, only a chip and a cavity are exemplarily given. Referring to Fig. 1, a chip package mold chase 10 includes a first mold chase and a second mold chase. In the embodiment, the first mold chase is a lower mold chase 100 and the second mold chase is an upper mold chase 102. A chip 104 is disposed on a carrier 106. In the embodiment, the carrier 106 is, for example, a lead frame. However in other embodiments, the carrier 106 can be a substrate. After the upper mold chase 102 and the lower mold chase 100 are combined, a cavity 108 is formed. The chip 104 and a part of the carrier 106 are located in the cavity 108. During a molding compound injecting process, first, a melted molding compound material 112 is pressed by a plunger 110 into a pot 114 of the upper mold chase 102. Next, the molding compound material 112 in the pot 114 flows along a runner 116 connected to the pot 114. The runner 116 has a pin gate 118. The molding compound material 112 in the runner 116 can be injected into the cavity 108 through the pin gate 118. After the molding compound material 112 in the cavity 108 is cured, an encapsulant is formed.

[0031] Fig. 2 is a diagram of a structure made by molding obtained after curing the molding compound material according to an embodiment of the present invention. Referring to Fig. 2, a structure made by molding 20 includes a plurality of chip package

structures 22 arranged in an array. For better showing, in Fig. 2, only the molding compound enclosing the carrier and the chip is shown. In addition, the structure made by molding 20 further includes a runner glue-bar 24, a pin gate glue-bar 26 and a glue-block 28. In more details, after the molding compound material in the runner is cured, the runner glue-bar 24 is formed; after the molding compound material in the pin gate is cured, the pin gate glue-bar 26 is formed; after the molding compound material in the pot is cured, the glue-block 28 is formed. The runner glue-bar 24 is connected to the glue-block 28. Besides, the runner glue-bar 24 is connected to the chip package structure 22 through the pin gate glue-bar 26. In particular, the dimension of the glue-block 28 is corresponding to the volume of the pot.

[0032] In the present invention, the upper mold chase 102 has different molding compound injecting units therein. The quantities of the chip package structures formed by the molding compound injecting units are different. Since the upper mold chase 102 has different molding compound injecting units therein, i.e., by disposing the molding compound injecting units with different quantities of the runners according to the real situation, it can be avoided to waste the using area of the carrier and the layout of the carrier from being restricted. In addition, by means of adjusting the quantities and/or volumes of the pots and the runners of the molding compound injecting units, the volumes of the molding compound materials accommodated by the molding compound injecting units are substantially equal to each other, which can avoid a lower yield of the chip packaging process due to the different flow velocity of the molding compound material caused by uneven molding compound injecting pressures during the molding compound injecting process. The detail of the upper mold chase 102 in the chip package mold chase

10 is described in follows.

[0033] Fig. 3 is a diagram of an upper mold chase in a chip package mold chase according to an embodiment of the present invention. Referring to Fig. 3, an upper mold chase 102 has a plurality of molding compound injecting units. In the embodiment, the molding compound injecting units include a molding compound injecting unit 200 and a molding compound injecting unit 202. The quantities and the layouts of the molding compound injecting unit 200 and the molding compound injecting unit 202 are not limited to Fig. 3, it can be adjusted according to the real requirement. In order to avoid a lower yield of the packaging process due to the different flow velocity of the molding compound material during the molding compound injecting process, the volumes of the molding compound materials accommodated by the molding compound injecting unit 200 and the molding compound injecting unit 202 must be substantially equal to each other. In addition, the quantity of the chip package structure formed by the molding compound injecting unit 200 should be greater than the quantity of the chip package structure formed by the molding compound injecting unit 202. In more details, in the embodiment, the molding compound injecting unit 200 includes a pot 200a and four runners 200b connected to the pot 200a, wherein each runner 200b has four pin gates 200c. That is to say, a molding compound injecting unit 200 can form 16 chip package structures. In addition, the molding compound injecting unit 202 includes a pot 202a and three runners 202b connected to the pot 202a, wherein each runner 202b has four pin gates 202c. That is to say, a molding compound injecting unit 202 can form 12 chip package structures. In other embodiments, the quantities of the runners and the pin gates in the molding compound injecting unit 200 and the molding compound injecting unit 202 can be adjusted according

to the real situation. The individual quantities of the molding compound injecting unit 200 and the molding compound injecting unit 202 can be adjusted either according to the real situation.

[0034] In order to make the volumes of the molding compound materials accommodated by the molding compound injecting unit 200 and the molding compound injecting unit 202 substantially equal to each other, the volume of the runner 202b must be greater than the volume of the runner 200b. In the embodiment, the above-mentioned object can be achieved by making the width of the runner 202b greater than the width of the runner 200b. In another embodiment, it can be achieved by making the depth of the runner 202b greater than the depth of the runner 200b.

[0035] In the embodiment, since the quantities of the chip package structures formed respectively by the molding compound injecting unit 200 and the molding compound injecting unit 202 are different from each other, i.e., the two units respectively have different quantities of runners, so that the quantities of the molding compound injecting unit 200 and the molding compound injecting unit 202 can be respectively adjusted according to the real requirement, which can effectively utilize the space in the upper mold chase 102 to meet the quantity requirement of the chips disposed on the carrier and avoid wasting the using area of the carrier and avoid the layout of the carrier from being restricted.

[0036] In another embodiment, in order to make the volumes of the molding compound materials accommodated by the molding compound injecting unit 200 and the molding compound injecting unit 202 substantially equal to each other, under the condition that the volumes of the runner 200b and the runner 202b are substantially equal to each other, the volume of the pot 202a can be greater than the volume of the pot 200a. At the time, the

formed glue-blocks (for example, the glue-block 28 in Fig. 2) respectively corresponding to the pot 200a and the pot 202a would have different dimensions.

[0037] In the embodiment, since the volumes of the molding compound materials accommodated by the molding compound injecting unit 200 and the molding compound injecting unit 202 are substantially equal to each other, it can be avoided that the flow velocities of the molding compound materials in the molding compound injecting unit 200 and the molding compound injecting unit 202 are different from each other during the molding compound injecting process.

[0038] In another embodiment, in order to make the volumes of the molding compound materials accommodated by the molding compound injecting unit 200 and the molding compound injecting unit 202 substantially equal to each other, under the condition that the volumes of the runner 200b and the runner 202b are substantially equal to each other and the volumes of the pot 200a and the pot 202a are substantially equal to each other, the above-mentioned object can be achieved by disposing a buffer pot connected to the pot 202a.

[0039] Fig. 4 is a diagram of an upper mold chase in a chip package mold chase according to another embodiment of the present invention. Referring to Fig. 4, the volumes of the runner 200b and the runner 202b are substantially equal to each other and the volumes of the pot 200a and the pot 202a are substantially equal to each other. The buffer pot 202d is connected to the pot 202a so as to accommodate the redundant molding compound material. In the embodiment, the buffer pot 202d has semi-spherical shape, but in other embodiments, the buffer pot 202d can have other shapes.

[0040] In terms of individual molding compound injecting unit in the mold chase, the

present invention can further make the total volume of the molding compound materials accommodated by the runners located at a side of the pot substantially equal to the total volume of the molding compound materials accommodated by the runners located at the opposite side of the pot so as to make the flow velocity of the molding compound materials located at the sides of the pot the same as the flow velocity of the molding compound materials located at the opposite side of the pot. In an embodiment, at the two opposite sides of the pot, the quantities of the formed chip package structures are the same, i.e., the quantity of the runners at the side of the pot is the same as the quantity of the runners respectively at the opposite side of the pot, so that the flow velocities of the molding compound materials at the two opposite sides of the pot are the same as each other. In another embodiment, if the quantity of the formed chip package structures at the side of the pot is different from the quantity of the formed chip package structures at the opposite side of the pot, i.e., the quantities of the runners at the two opposite sides of the pot are different from each other, the volumes of the runners at the two opposite sides of the pot must be different from each other.

[0041] Fig. 5 is a diagram of a molding compound injecting unit according to an embodiment of the present invention. Referring to Fig. 5, in the molding compound injecting unit 500, since there are two runners 502b over the pot 502a and only one runner 502c under the pot 502a, so that the volume of the runner 502c under the pot 502a must be greater than the volume of the runner 502b over the pot 502a. In the embodiment, the width of the runner 502c is greater than the width of the runner 502b. In another embodiment, the depth of the runner 502c is greater than the depth of the runner 502b. In the embodiment, there are two runners 502b at a side of the pot 502a, while there is only

one runner 502c at the opposite side. In other embodiments, it can be that different quantities of the runners are disposed at different sides of the pot according to the real requirement.

[0042] Fig. 6 is a diagram of an upper mold chase in a chip package mold chase

5 according to further an embodiment of the present invention. Referring to Fig. 6, in the embodiment, the upper mold chase 400 has a plurality of the same but interlaced arranged in left-right and right-left molding compound injecting units 402. The molding compound injecting unit 402 includes a pot 400a and five runners connected to the pot 400a, wherein two runners 400b are located at a side of the pot 400a, and the other three runners 400c are
10 located at the opposite side of the pot 400a. In the embodiment, since each molding compound injecting unit 402 is the same as each other and can form a same quantity of the chip package structures, i.e., there are the same quantity (five) of runners, so that the flow velocities of the molding compound materials in every molding compound injecting unit 402 are the same. However, for each molding compound injecting unit 402, since the total
15 quantity of the chip package structure chip package structures formed at a side of the pot 400a is not the same as the total quantity of the chip package structure chip package structures formed at the opposite side of the pot 400a, i.e., the quantities of the runners at the two opposite sides of the pot 400a are different from each other, so that the volumes of the runners at the two opposite sides of the pot 400a must be adjusted. In the embodiment,
20 the width of the runner 400b is greater than the width of the runner 400c. In another embodiment, the depth of the runner 400b is greater than the depth of the runner 400c. In further another embodiment, a buffer pot is disposed beside the pot. In the embodiment, different quantities of the runners are disposed at different sides of the pot 400a, which can

thereby in a limited using space of the upper mold chase increase the quantity of the runners to avoid wasting the using area of the carrier and avoid the layout of the carrier from being restricted.

[0043] Fig. 7 is a diagram of a structure made by molding obtained after curing the

5 molding compound material according to another embodiment of the present invention.

Referring to Fig. 7, similarly to Fig. 2, a structure made by molding 70 includes a plurality of chip package structures 72 arranged in an array. For better showing, in Fig. 7, only the

molding compound enclosing the carrier and the chips are shown. The structure made by

molding 70 further includes two runner glue-bars 74a and 74b, a pin gate glue-bar 76 and

10 two glue-blocks 78a and 78b. The width of the runner glue-bar 74b is greater than the

width of the runner glue-bar 74a, the dimension of the glue-block 78b is greater than the

dimension of the glue-block 78a. In addition, the width of the runner glue-bar 74b at a

side of the glue-block 78b is greater than the width of the runner glue-bar 74b at the

opposite side of the glue-block 78b. It can be seen from the structure made by molding 70

15 that there are two groups of molding compound injecting units in the upper mold chase to

form the structure made by molding 70. In the first group of the molding compound

injecting units, there are four runners and in the second group of the molding compound

injecting units, there are three runners. In order to make the volumes of the molding

compound materials accommodated by each molding compound injecting unit substantially

20 the same as each other, the width of the runners of the second group of the molding

compound injecting units is greater than the width of the runners of the first group of the

molding compound injecting units, and the volume of the pot of the second group of the

molding compound injecting units is greater than the volume of the pot of the first group of

the molding compound injecting units. In addition, in the second group of the molding compound injecting units, the width of the runner at a side is greater than the width of the runner at the opposite side.

[0044] It should be noted that the present invention is not limited by the above-mentioned
5 embodiments. The user can adjust the quantity of the molding compound injecting units in the upper mold chase, the types of the molding compound injecting units, the arrangement of the molding compound injecting unit, the dimensions of the runners, the quantities of the runners, the dimension of the pots or disposing buffer pots according to the real situation.

10 [0045] It will be apparent to those skilled in the art that the descriptions above are several preferred embodiments of the present invention only, which does not limit the implementing range of the present invention. Various modifications and variations can be made to the structure of the present invention without departing from the scope or spirit of the invention.

WHAT IS CLAIMED IS:

1. A chip package mold chase, comprising a first mold chase and a second mold chase disposed oppositely to each other, wherein after the first mold chase and the second mold chase are combined, a plurality of cavities are formed, each cavity is for accommodating a carrier and a chip disposed on the carrier, and the second mold chase
5 comprises:

a plurality of molding compound injecting units, wherein the molding compound injecting units comprise at least a first molding compound injecting unit and a second molding compound injecting unit, and the first molding compound injecting unit and the second molding compound injecting unit respectively comprise:

10 a pot; and

a plurality of runners connected to the pot, wherein each runner has a plurality of pin gates and each pin gate is connected to a corresponding cavity;

wherein a molding compound material is injected into each cavity through the pots, the runners and the pin gates and encloses the carrier and the chip so as to form a
15 plurality of chip package structures, the volume of the molding compound material accommodated by the first molding compound injecting unit is substantially equal to the volume of the molding compound material accommodated by the second molding compound injecting unit, and the quantity of the chip package structures formed by the first molding compound injecting unit is greater than the quantity of the chip package structures
20 formed by the second molding compound injecting unit.

2. The chip package mold chase as claimed in claim 1, wherein the quantity of the runners of the first molding compound injecting unit is greater than the quantity of the

runners of the second molding compound injecting unit.

3. The chip package mold chase as claimed in claim 1, wherein the width of the runners of the first molding compound injecting unit is less than the width of the runners of the second molding compound injecting unit.

5 4. The chip package mold chase as claimed in claim 1, wherein the depth of the runners of the first molding compound injecting unit is less than the depth of the runners of the second molding compound injecting unit.

5 5. The chip package mold chase as claimed in claim 1, wherein the volume of the pot of the first molding compound injecting unit is less than the volume of the pot of the
10 second molding compound injecting unit.

6. The chip package mold chase as claimed in claim 1, wherein the second molding compound injecting unit further comprises a buffer pot connected to the pot of the second molding compound injecting unit.

7. The chip package mold chase as claimed in claim 1, wherein in at least a
15 molding compound injecting unit, the total volume of the molding compound materials accommodated by the runners located at a side of the pot is substantially the same as the total volume of the molding compound materials accommodated by the runners located at an opposite side of the pot, and the quantity of the chip package structures located at the side of the pot is greater than the quantity of the chip package structures located at the
20 opposite side of the pot.

8. The chip package mold chase as claimed in claim 7, wherein in the molding compound injecting unit, the quantity of the runners located at the side of the pot is greater than the quantity of the runners located at the opposite side of the pot.

9. The chip package mold chase as claimed in claim 8, wherein in the molding compound injecting unit, the width of the runners located at the side of the pot is less than the width of the runners located at the opposite side of the pot.

10. The chip package mold chase as claimed in claim 8, wherein in the molding compound injecting unit, the depth of the runners located at the side of the pot is less than the depth of the runners located at the opposite side of the pot.

11. A chip package mold chase, comprising a first mold chase and a second mold chase disposed oppositely to each other, wherein after the first mold chase and the second mold chase are combined, a plurality of cavities are formed, each cavity is for accommodating a carrier and a chip disposed on the carrier, and the second mold chase comprises:

a plurality of molding compound injecting units, wherein each molding compound injecting unit comprises:

a pot; and

a plurality of runners connected to the pot, wherein each runner has a plurality of pin gates and each pin gate is connected to a corresponding cavity;

wherein a molding compound material is injected into each cavity through the pots, the runners and the pin gates and encloses the carrier and the chip so as to form a plurality of chip package structures, wherein in at least one of the molding compound injecting units, the total volume of the molding compound materials accommodated by the runners located at a side of the pot is substantially the same as the total volume of the molding compound materials accommodated by the runners located at an opposite side of the pot, and the quantity of the chip package structures located at the side of the pot is

greater than the quantity of the chip package structures located at the opposite side of the pot.

12. The chip package mold chase as claimed in claim 11, wherein in at least one of the molding compound injecting units, the quantity of the runners located at the side of the pot is greater than the quantity of the runners located at the opposite side of the pot.

13. The chip package mold chase as claimed in claim 12, wherein in at least one of the molding compound injecting units, the width of the runners located at the side of the pot is less than the width of the runners located at the opposite side of the pot.

14. The chip package mold chase as claimed in claim 12, wherein in at least one of the molding compound injecting units, the depth of the runners located at the side of the pot is less than the depth of the runners located at the opposite side of the pot.

15. A chip package mold chase, comprising:

a first molding compound injecting unit, having a first pot and a plurality of runners connected to the first pot ; and

a second molding compound injecting unit, having a second pot and a plurality of runners connected to the second pot;

wherein the quantity of the runners of the first molding compound injecting unit is greater than the quantity of the runners of the second molding compound injecting unit.

16. The chip package mold chase as claimed in claim 15, wherein the volume of the molding compound material accommodated by the first molding compound injecting unit is substantially equal to the volume of the molding compound material accommodated by the second molding compound injecting unit.

17. The chip package mold chase as claimed in claim 16, wherein the width of

the runners of the first molding compound injecting unit is less than the width of the runners of the second molding compound injecting unit.

18. The chip package mold chase as claimed in claim 16, wherein the depth of the runners of the first molding compound injecting unit is less than the depth of the runners of the second molding compound injecting unit.

19. The chip package mold chase as claimed in claim 16, wherein the volume of the first pot is less than the volume of the second pot.

20. The chip package mold chase as claimed in claim 16, wherein the second molding compound injecting unit further comprises a buffer pot connected to the second pot.

21. The chip package mold chase as claimed in claim 15, wherein the quantity of the chip package structures formed by the first molding compound injecting unit is greater than the quantity of the chip package structures formed by the second molding compound injecting unit.

CHIP PACKAGE MOLD CHASE

ABSTRACT OF THE DISCLOSURE

A chip package mold chase, which includes a first mold chase and a second mold chase disposed oppositely to each other. The second mold chase includes a plurality of molding compound injecting units. The molding compound injecting units include at least
5 a first molding compound injecting unit and a second molding compound injecting unit, wherein the volume of the molding compound material accommodated by the first molding compound injecting unit is substantially equal to the volume of the molding compound material accommodated by the second molding compound injecting unit, and the quantity
10 of the chip package structures formed by the first molding compound injecting unit is greater than the quantity of the chip package structures formed by the second molding compound injecting unit.

Fig. 3