

SLURRY DISPENSING APPARATUS

TECHNICAL FIELD

The present disclosure relates to the technical field of wafer polishing, in particular to a slurry dispensing apparatus.

BACKGROUND

Chemical Mechanical Polishing (CMP) is one of the key technologies for surface processing of semiconductor substrates. Chemical mechanical polishing can make the substrate surface flatter, and has the advantages of low processing cost and processing being simple, and thus become the most commonly used surface smoothing technology for semiconductor materials at present.

In the process of substrate polishing, the main process steps are as follows: first, the polishing head sucks the substrate and places the substrate on the polishing pad; then a downward pressure is exerted on the substrate through the polishing head; at the same time, the slurry is supplied to the polishing pad through a delivery system; the polishing pad and the polishing head rotate in the same direction but on different axes; and the slurry follows the polishing pad to the bottom of the substrate under the polishing head, and the particles in the slurry grind and polish the substrate.

In the process of substrate polishing, the use and distribution of the slurry play a decisive role in chemical mechanical polishing. The slurry in chemical mechanical polishing is mainly for: first, forming a soft layer on the surface of the substrate through a redox reaction, and then mechanically polishing the surface of the substrate through the particles in the slurry, thereby completing the polishing process.

In order to improve the uniformity of distribution of the slurry on the polishing pad, a slurry dispensing apparatus is designed, as shown in Fig. 1 to Fig. 3. The slurry dispensing structure in this slurry dispensing apparatus has a structure of a cuboid or a cuboid with an arc, with slurry pipelines for the flow of slurry therein. An end of the slurry dispensing structure (shown on the left side of Fig. 2) is connected to a mechanical control arm on the equipment side, so that the slurry dispensing structure can be controlled by the mechanical control arm to make an arc motion, so as to adjust the slurry dispensing structure to the optimal position above the polishing pad. A head position of the slurry dispensing structure

(shown on the right side of Fig. 2) is designed with a protruding cylindrical pipeline structure, which is provided with four dispensing pipelines. The four dispensing pipelines are connected to four slurry pipelines, respectively. The advantage of this type of slurry dispensing apparatus is that different slurries may be used in different polishing processes without replacing the slurry dispensing apparatus. (As shown in Fig. 2) A certain height (Height) is maintained between the lower surface of the slurry dispensing pipelines and the upper surface of the polishing pad, where the height range is $3 \leq \text{Height} \leq 10$ (mm). Through the mechanical control arm, the dispensing range of the slurry is adjusted to ensure that the slurry can effectively enter the polishing head to achieve the polishing of the substrate.

However, main problems faced by this type of slurry dispensing apparatus include:

since the polishing pad makes circular motions with the polishing disc, most of the slurry dispensed on the polishing pad surface is thrown out due to the influence of centrifugal force, with only a small portion of the slurry participating in the polishing process of the substrate, thereby reducing the actual rate of utilization of the slurry.

In view of the shortcomings in the existing technology, it is necessary to design a new slurry dispensing apparatus.

SUMMARY

Therefore, the technical problem to be solved by the present disclosure is to overcome the shortcomings of the actual rate of utilization of the slurry dispensed on the polishing pad in the existing dispensing mechanism, thereby providing a slurry dispensing apparatus.

In order to solve the above technical problem, the following technical solutions of the present disclosure are provided.

A slurry dispensing apparatus, comprising:

a slurry dispensing structure, having a slurry dispensing chamber therebelow; wherein the slurry dispensing chamber is suitable of forming an enclosed chamber with upper surface of a polishing pad for accommodating slurry, and the slurry dispensing structure is provided with a slurry dispensing port in communication with the slurry dispensing chamber for allowing the slurry to enter the slurry dispensing chamber;

a pressing plate structure, comprising a pressing plate in the slurry dispensing chamber; and

a driving structure, for driving the pressing plate to reciprocate in the slurry dispensing chamber.

Optionally, side wall of the slurry dispensing chamber is continuous and in contact with surface of the polishing pad, for confining the slurry within the enclosed chamber.

Optionally, the contact pressure between the side wall of the slurry dispensing chamber and the surface of polishing pad is 0.1psi to 0.2psi.

Optionally, there is a gap between lower surface of the pressing plate and the upper surface of the polishing pad, the gap having a height less than or equal to 0.5mm.

Optionally, the pressing plate and the slurry dispensing chamber both have a rectangular shape, and a distance between two sides of the pressing plate and corresponding side walls of the slurry dispensing chamber is less than or equal to 1mm.

Optionally, the pressing plate is provided with a through hole penetrating upper and lower surfaces of the pressing plate.

Optionally, a pressing plate chamfer inclined toward side wall of the slurry dispensing chamber is provided around bottom surface of the pressing plate.

Optionally, an inner chamfer inclined toward inside of the slurry dispensing chamber is provided on inner side of bottom surface of the side wall of the slurry dispensing chamber.

Optionally, the slurry dispensing structure is provided with a linear through slot on top wall of the slurry dispensing chamber; and the driving structure passes through the through slot and is connected to the pressing plate structure.

Optionally, a plurality of the slurry dispensing ports are provided, and are all opened on the top wall of the slurry dispensing chamber; and the plurality of slurry dispensing ports are located on one side, or opposite sides, of the through slot.

The technical solutions of the present disclosure have the following benefits:

1. In the slurry dispensing apparatus provided by the present disclosure, after the slurry with a certain viscosity enters the slurry dispensing chamber from the slurry dispensing port, it is accommodated in the enclosed chamber and is not thrown out with the rotation of the polishing pad, which can improve the rate of utilization of the slurry. At the same time, the slurry is evenly coated on the surface of the polishing pad with the reciprocating motion of the pressing plate, improving the uniformity of distribution of the slurry on the surface of the polishing pad. In addition, the slurry is not dispensed directly on the polishing pad, but is continuously delivered to a position between the substrate and the polishing pad after being evenly distributed by the slurry dispensing apparatus, thereby improving the rate of utilization of the slurry and the effect of chemical mechanical polishing of the substrate by the slurry.

2. In the slurry dispensing apparatus provided by the present disclosure, the pressing plate chamfer can push the slurry to the periphery of the slurry dispensing chamber during the reciprocating motion of the pressing plate, ensuring that the slurry is distributed on the surface of the polishing pad corresponding to the slurry dispensing chamber.

3. In the slurry dispensing apparatus provided by the present disclosure, the inner chamfer can scrape the slurry in the grooves when the polishing pad is rotating out of the slurry dispensing chamber, further improving the uniformity of distribution of the slurry in the grooves.

4. In the slurry dispensing apparatus provided by the present disclosure, the through hole on the pressing plate can avoid the formation of suction tension between the slurry and the lower surface of the pressing plate, making the horizontal movement of the pressing plate in the enclosed chamber smoother.

5. In the slurry dispensing apparatus provided by the present disclosure, the side wall of the slurry dispensing chamber is continuous and in contact with the surface of the polishing pad, and the contact pressure between the side wall of the slurry dispensing chamber and the surface of the polishing pad is 0.1psi to 0.2psi. This ensures normal rotation of the polishing pad, and also ensures that the slurry dispensed on the surface of the polishing pad corresponding to the slurry dispensing chamber would not be thrown out during the rotation of the polishing pad.

BRIEF DESCRIPTION OF DRAWINGS

In order to more clearly illustrate embodiments of the present disclosure or the technical solutions in the prior art, the following will briefly describe the drawings used in the description of the embodiments or the prior art. Clearly, the drawings of the following descriptions are some embodiments of the present disclosure. Those of ordinary skill in the art may obtain other drawings based on these drawings without creative effort.

Fig. 1 is a schematic diagram of an existing slurry dispensing apparatus;

Fig. 2 is a schematic diagram of the existing slurry dispensing apparatus and polishing pad;

Fig. 3 is a schematic diagram of the process of rotation and cooperation of the existing polishing head and polishing pad;

Fig. 4 is a schematic diagram illustrating a position of a slurry dispensing apparatus of the present disclosure in a substrate polishing system;

Fig. 5 is a schematic diagram illustrating cooperation between the slurry dispensing apparatus of the present disclosure and a polishing pad;

Fig. 6 is a schematic diagram illustrating cooperation among the slurry dispensing structure, a pressing plate structure and a driving structure in the present disclosure;

Fig. 7 is a schematic diagram of the slurry dispensing structure in the present disclosure;

Fig. 8 is a schematic diagram of the pressing plate structure in the present disclosure;

Fig. 9 is a schematic diagram illustrating cooperation among the slurry dispensing structure, the pressing plate and the polishing pad in the present disclosure;

Fig. 10 is a schematic diagram of the driving structure in the present disclosure.

Reference numerals:

1. slurry dispensing apparatus; 11. driving structure; 12. slurry dispensing structure; 121. slurry dispensing chamber; 122. slurry dispensing port; 123. through slot; 124. enclosed chamber; 125. inner chamfer; 13. pressing plate structure; 131. through hole; 132. pressing plate chamfer; 2. polishing head; 21. polishing head retaining ring; 3. polishing pad; 4. pad conditioner; 5. UPW pipeline; 6. mechanical control arm; 7. connecting rod; 8. clamping structure.

DETAILED DESCRIPTION

The technical solutions of the present disclosure will be more clearly and completely described below with reference to the drawings. Clearly, the described embodiments are only some of the embodiments of the present disclosure, not all of the embodiments. Based on the embodiments in the present disclosure, all other embodiments obtainable by those of ordinary skill in the art without creative efforts shall fall within the protection scope of the present disclosure.

In the description of the present disclosure, it should be noted that orientation or positional relationship indicated by the terms "centre", "upper", "lower", "left", "right", "vertical", "horizontal", "inner", "outer", etc. is based on the orientation or positional relationship as shown in the drawings, only for the convenience of describing and simplifying the description, and does not indicate or imply that the referred apparatus or element must have a specific orientation, or constructed or operated in a specific orientation. Thus, it should not be construed as a limitation of the present disclosure. Further, the terms "first", "second", "third" are used for descriptive purposes only and cannot be construed as indicating or implying relative importance.

In the description of the present disclosure, it should be noted that, unless otherwise expressly specified and limited, the terms "install", "connect" and "connection" should be construed in a broad sense. For example, it may be a fixed connection or a detachable connection, or integral connection. It may be mechanical connection or electrical connection. It may be direct connection, or indirect connection through an intermediate medium, or internal communication between two components. For those of ordinary skill in the art, the specific meanings of the above terms in the present disclosure can be understood in specific situations.

In addition, the technical features involved in the different embodiments of the present disclosure described below can be combined with each other as long as they do not conflict with each other.

Embodiment

As shown in Fig. 4, the substrate chemical mechanical polishing system includes a polishing pad, a polishing head 2, and a slurry dispensing apparatus 1, a pad conditioner 4 and a UPW pipeline 5 disposed on the surface of the polishing pad 3.

As shown in Fig.4 to Fig. 10, the embodiment provides a slurry dispensing apparatus 1 for dispensing slurry on the surface of the polishing pad 3 and evenly distributing the slurry on the surface of the polishing pad 3, including a slurry dispensing structure 12, a pressing plate structure 13 and a driving structure 11.

One end of the slurry dispensing structure 12 is connected to a mechanical control arm 6 on the equipment side. In the embodiment, the slurry dispensing structure 12 is connected to the mechanical control arm 6 through a clamping structure 8. The slurry dispensing structure 12 may also be clamped to the mechanical control arm 6 through a clamping shaft. These are not specifically limited in the present disclosure.

The slurry dispensing structure 12 may be controlled by the mechanical control arm 6 to move to a target position on the surface of the polishing pad 3. Further, the mechanical control arm 6 may also control the contact pressure between the slurry dispensing structure 12 and the surface of the polishing pad 3 to be between 0.1psi and 0.5psi, preventing the contact pressure between the slurry dispensing structure 12 and the surface of the polishing pad 3 from being too large to impede the rotation of the polishing pad 3. As shown in Fig. 5, in the embodiment, the longitudinal dimension of the slurry dispensing structure 12 cannot be smaller than the size of the polishing head retaining ring 21. Specifically, the longitudinal dimension of the slurry dispensing structure 12 cannot be smaller than the

diameter of the polishing head retaining ring 21. Optionally, the longitudinal dimension of the slurry dispensing structure 12 is substantially consistent with the diameter of the polishing head retaining ring 21, so that the coverage of the slurry is substantially consistent with the size of the substrate, thereby improving the rate of utilization of the slurry, avoiding a waste of slurry due to the longitudinal dimension of the slurry dispensing structure 12 being too large. At the same time, it also avoids the absence of slurry under certain part of the substrate which results in ineffective polishing of the substrate, due to the longitudinal dimension of the slurry dispensing structure 12 being smaller than the diameter of the polishing head retaining ring 21.

A slurry dispensing chamber 121 is provided below the slurry dispensing structure 12, the slurry dispensing chamber 121 being suitable for forming an enclosed chamber 124 with the surface of the polishing pad 3 for accommodating the slurry. In the embodiment, the slurry dispensing chamber 121 has a rectangular shape, and the side walls of the slurry dispensing chamber 121 are continuous and in contact with the surface of the polishing pad 3, suitable for confining the slurry within the enclosed chamber 124. The contact pressure between the side walls of the slurry dispensing chamber 121 and the surface of the polishing pad 3 is 0.1psi to 0.5psi. Since the slurry is confined within the enclosed chamber 124, the slurry with a certain viscosity is prevented from being thrown out with the rotation of the polishing pad, reducing the waste rate of slurry and improving the rate of utilization of the slurry. Further, not only to ensure smooth rotation of the polishing pad, but also to confine the slurry in the enclosed chamber 124 so that the slurry will not flow out of the enclosed chamber 124 from the side walls of the slurry dispensing chamber 121 with the rotation of the polishing pad, the side walls of the slurry dispensing chamber 121 are continuous and in contact with the surface of the polishing pad 3, and the contact pressure therebetween is 0.1psi to 0.2psi. The slurry in the enclosed chamber 124 enters the grooves on the surface of the polishing pad 3. As the polishing pad moves relative to the slurry dispensing structure 12, the slurry reaches the bottom surface of the substrate under the polishing head 2 along the grooves and the surface of the substrate is mechanically polished with the help of particles in the slurry. Optionally, an inner chamfer 125 inclined toward inside of the slurry dispensing chamber 121 is provided on inner side of bottom surface of the side wall of the slurry dispensing chamber 121. In this way, during the rotational movement of the polishing pad relative to the slurry dispensing structure 12, the inner chamfer 125 may scrape and

spread the slurry in the grooves, improving the uniformity of distribution of the slurry in the grooves.

In order to facilitate the dispensing of the slurry into the enclosed chamber 124 at any time as needed, the slurry dispensing structure 12 is provided with a slurry dispensing port 122 in communication with the slurry dispensing chamber 121 and suitable for allowing the slurry to enter the slurry dispensing chamber 121. In the embodiment, there are four slurry dispensing ports 122, and they are all opened on the top wall of the slurry dispensing chamber 121 so that different slurries may be dispensed through the slurry dispensing ports 122 into the enclosed chamber 124 according to different process requirements to achieve the corresponding substrate polishing.

The slurry dispensing structure 12 is further provided with a linear through slot 123 on the top wall of the slurry dispensing chamber 121. The four slurry dispensing ports 122 are interlaced and arranged at equal intervals on two opposite sides of the through slot 123. In this way, in the longitudinal direction of the slurry dispensing chamber 121 (as shown by the arrow in Fig. 7), the dispensing positions of the slurry are preliminarily equalized. The four slurry dispensing ports 122 may also be arranged on the same side of the through slot 123; and the number of the slurry dispensing ports 122 does not need to be four. The specific number may be set according to actual needs, and there are no specific requirements here.

The pressing plate structure 13 includes a pressing plate in the slurry dispensing chamber 121. In the embodiment, the pressing plate is rectangular, and the pressing plate is provided with a through hole 131 that penetrates the upper and lower surfaces of the pressing plate. Specifically, the through holes 131 are in the shape of a long strip, and the through holes 131 are provided to avoid the formation of suction tension between the slurry and the lower surface of the pressing plate, making the horizontal movement of the pressing plate in the enclosed chamber smoother. From the perspective of Fig. 9, the connecting rod 7 of the driving structure 11 moves along the linear through slot 123 to drive the pressing plate to horizontally reciprocate from left to right in the enclosed chamber 124, causing the slurry in the enclosed chamber 124 to move and be evenly distributed on the surface of the polishing pad 3. From the perspective of Fig. 9, the distance between the left and right sides of the pressing plate and the corresponding side walls of the slurry dispensing chamber 121 is less than or equal to 1mm, so as to drive the slurry to slide on the surface of the polishing pad 3 with maximum range to evenly distribute the slurry on the surface of the polishing pad 3. To avoid collision between the pressing plate and the side walls of slurry dispensing

chamber 121, the distances between the above two sides of the pressing plate and the corresponding side walls of the slurry dispensing chamber 121 should not be zero. This needs to be controlled by the distances between the two ends of the through slot 123 and the two ends of the top wall of the slurry dispensing chamber 121. Further, a pressing plate chamfer 132 inclined toward the side wall of the slurry dispensing chamber 121 is provided around bottom surface of the pressing plate. The pressing plate chamfer 132 can form a scraping and spreading effect on the slurry, which facilitates the periphery of the bottom surface of the pressing plate to effectively push the slurry toward the periphery of the enclosed chamber 124, improving the uniformity of the distribution of the slurry on the surface of the polishing pad 3. There is a gap between the lower surface of the pressing plate and the surface of the polishing pad 3. In this way, the pressing plate will not directly contact the surface of the polishing pad 3 to generate friction, thereby avoiding affecting the reciprocating motion of the pressing plate or shortening the service life of the polishing pad 3. In the embodiment, the gap has a height less than or equal to 0.5mm, so that the pressing plate is able to better spread the slurry evenly on the surface of the polishing pad 3. If the gap is too large, part of the slurry in the lower position cannot be pushed and spread. If the gap is too small, the thickness of the slurry on the surface of the polishing pad 3 will be too small, which will affect the amount of slurry between the surface of the polishing pad 3 and the substrate, thereby affecting the effect of chemical mechanical polishing on the substrate.

The driving structure 11 is suitable for driving the pressing plate to reciprocate in the slurry dispensing chamber 121. In the embodiment, one end of the connecting rod 7 of the driving structure 11 is thread-connected to the pressing plate, and the other end is connected to the horizontally moving slide table. From the perspective of Fig. 9, the horizontally moving slide table drives the connecting rod 7 and the pressing plate fixedly connected to the connecting rod 7 to perform horizontal reciprocating movements from left to right. In the embodiment, the horizontally moving slide table is a pneumatic sliding table. In the embodiment, the maximum displacement selected for the range of displacement of the horizontally moving slide table is 250mm, to meet the reciprocating motion range of the pressing plate. The maximum displacement of the horizontally moving slide table may be other values, which are specifically determined according to the dimension of the slurry dispensing chamber 121 and the reciprocating motion range of the pressing plate. In the embodiment, the horizontally moving slide table is connected to the top of the mechanical control arm 6 on the equipment side, so as to facilitate the mechanical control arm 6 to

control the horizontally moving slide table to make an arc swing to adapt to the position of the slurry dispensing structure 12; and thus the range in which the slurry dispensing structure 12 is arranged on the surface of the polishing pad 3 is expanded, and in turn the range in which the slurry is uniformly distributed on the surface of the polishing pad 3 is expanded.

The working process of the slurry dispensing apparatus 1 in the embodiment is described below.

Through the mechanical control arm 6, the slurry dispensing structure 12 and the horizontally moving slide table are positioned to a target position on the surface of the polishing pad 3, and in the process, the polishing pad 3 is in a stationary state.

The slurry is dispensed into the slurry dispensing structure 12 via the slurry dispensing ports 122 through the slurry delivery pipe (not shown), and in the process, the polishing pad 3 is in the stationary state; and the pre-flow time of the slurry is 7s to 10s. In this way, an effective accumulation thickness of the slurry can be formed in the enclosed chamber 124, so that there is always slurry retained on the surface of the polishing pad 3 corresponding to the enclosed chamber 124.

After the pre-flow of the slurry, the driving structure 11 is turned on to drive the pressing plate to reciprocate horizontally in the slurry dispensing chamber 121, and the bottom surface of the pressing plate spreads the slurry on the surface of the polishing pad 3; during the reciprocating motion, the pressing plate chamfer 132 pushes the slurry between the sides of the pressing plate and the corresponding side walls toward the corresponding side walls of the slurry dispensing chamber 121, to avoid the absence of the slurry around the periphery of the slurry dispensing chamber 121. In this way, the slurry is evenly distributed on the surface of the polishing pad 3 through the reciprocating motion of the pressing plate in the slurry dispensing chamber 121. After being evenly distributed by the slurry dispensing apparatus 1, the slurry is continuously delivered to a position between the substrate and the polishing pad 3, thereby improving the rate of utilization of the slurry and the effect of chemical mechanical polishing of the substrate by the slurry.

During the process of substrate polishing, the polishing pad 3 rotates; in the process where the surface of the polishing pad 3 rotates out of the slurry dispensing chamber 121, the inner chamfer 125, especially the inner chamfer 125 corresponding to the longitudinal side wall of the slurry dispensing chamber 121 scrapes and spreads again the slurry in the grooves on the surface of the polishing pad 3, to further improve the uniformity of the distribution of the slurry in the grooves. The slurry in the grooves and on the surface of the

polishing pad 3 is brought to the bottom surface of the substrate under the polishing head 2; and chemical mechanical polishing of the substrate is carried out through the relative motion between the polishing pad and the substrate.

After the chemical mechanical polishing is completed, the dispensing of the slurry ends.

Ultrapure water or deionized water is used to flush the polishing pad 3, to remove the particulate pollutants generated during the substrate polishing process. In the embodiment, as shown in Fig. 4, the slurry dispensing apparatus 1 is located after the UPW pipeline 5 and is set at an angle with the UPW pipeline 5. The angle is toward the centre of the polishing pad. When the UPW pipeline 5 is flushing the polishing pad towards the slurry dispensing apparatus 1, since the side walls of the slurry dispensing chamber 121 are continuous and are in complete contact with the surface of the polishing pad 3, first, the large amount of sewage caused by UPW flushing can be prevented from flowing toward the substrate polishing area under the polishing head 2, and second, the sewage can be prevented from mixing with the slurry that newly enters the slurry dispensing chamber 121 to cause contamination of the slurry.

Clearly, the above embodiments are only examples for clear description, and are not intended to limit the manner of implementation. For those of ordinary skill in the art, there are other variations or changes that can be made in different forms based on the above description. It is not necessary or possible to exhaust all embodiments here. The obvious variations or changes derived therefrom are still within the protection scope of the present disclosure.

CLAIMS

1. A slurry dispensing apparatus, comprising:

a slurry dispensing structure (12), having a slurry dispensing chamber (121) therebelow; wherein the slurry dispensing chamber (121) is suitable for forming an enclosed chamber (124) with upper surface of a polishing pad (3) for accommodating slurry, and the slurry dispensing structure (12) is provided with a slurry dispensing port (122) in communication with the slurry dispensing chamber (121) for allowing the slurry to enter the slurry dispensing chamber (121);

a pressing plate structure (13), comprising a pressing plate in the slurry dispensing chamber (121); and

a driving structure (11), for driving the pressing plate to reciprocate in the slurry dispensing chamber (121).

2. The slurry dispensing apparatus according to claim 1, wherein side wall of the slurry dispensing chamber (121) is continuous and in contact with surface of the polishing pad (3), for confining the slurry within the enclosed chamber (124).

3. The slurry dispensing apparatus according to claim 2, wherein contact pressure between the side wall of the slurry dispensing chamber (121) and the surface of the polishing pad (3) is 0.1psi to 0.2psi.

4. The slurry dispensing apparatus according to any one of claims 1 to 3, wherein there is a gap between lower surface of the pressing plate and the upper surface of the polishing pad (3), the gap having a height less than or equal to 0.5mm.

5. The slurry dispensing apparatus according to claim 4, wherein the pressing plate and the slurry dispensing chamber (121) both have a rectangular shape, and a distance between two sides of the pressing plate and corresponding side walls of the slurry dispensing chamber (121) is less than or equal to 1 mm.

6. The slurry dispensing apparatus according to claim 4, wherein the pressing plate is provided with a through hole (131) penetrating upper and lower surfaces of the pressing plate.

7. The slurry dispensing apparatus according to claim 4, wherein a pressing plate chamfer (132) inclined toward side wall of the slurry dispensing chamber (121) is provided around bottom surface of the pressing plate.

8. The slurry dispensing apparatus according to claim 4, wherein an inner chamfer (125) inclined toward inside of the slurry dispensing chamber (121) is provided on inner side of bottom surface of side wall of the slurry dispensing chamber (121).

9. The slurry dispensing apparatus according to claim 1, wherein the slurry dispensing structure (12) is provided with a linear through slot (123) on top wall of the slurry dispensing chamber (121); and the driving structure (11) passes through the through slot (123) and is connected to the pressing plate structure (13).

10. The slurry dispensing apparatus according to claim 9, wherein a plurality of the slurry dispensing ports (122) are provided, and are all opened on the top wall of the slurry dispensing chamber (121); and the plurality of slurry dispensing ports (122) are located on one side, or opposite sides, of the through slot (123).