

An automatic placement of the bulkhead device

Technical field

The utility model relates to an automatic placing partition device.

Technique Background

FPC board is a flexible circuit board, is a highly reliable and can be printed around the printed circuit board, its important components are double-sided adhesive, insulation cover film, reinforced board, electromagnetic shielding film and other auxiliary materials, and through the paste Attached to the copper foil substrate to achieve a variety of functions. Usually FPC board after the attachment of the auxiliary material does not allow the direct stack, the need to place the partition when the partition to protect, the existing a lot of artificial fixture by way to place the partition, a larger increase in labor, and labor efficiency is relatively low , And thus also increase production costs.

Utility model content

The utility model is intended to at least to some extent solve one of the above technical problems or at least provide a useful commercial choice. For this reason, the object of the utility model is to propose a device for automatically placing a bulkhead device, which has a high production efficiency.

An automatic partition board placingfor placing a partition between FPC boards, comprising a machine table and a moving assembly And the machine table is arranged adjacent to each other with an FPC board receiving station and a partitioning plate, the partitioning table is provided with a partition stripping device, the moving part comprises a mechanical guide groove, which is arranged symmetrically on the At least three pairs of vacuum chucks on the mechanical guide and a control unit, the vacuum chuck being movable along the mechanical guide under the action of the control unit.

Further, the at least three pair of vacuum chucks are arranged symmetrically along

the longitudinal axis of the machine, and the at least one pair of vacuum chucks can be moved from the FPC stage to the baffle plate.

Further, the vacuum chuck includes a gold piece having a gold piece holder fixed at one end of the guide groove and the other end fixed to the upper end of the gold piece and a rubber suction cup provided at the lower end of the gold piece.

Further, the gold piece includes a hollow rod, a gas pipe joint provided at an upper end of the air rod, and a spring fitted to the outer surface of the hollow rod, and the lower end of the hollow rod is connected to the rubber suction cup.

Further, the baffle stripping device includes a support provided on both sides of the spacer placing table and a pressing bar having both ends connected to the holder, respectively.

Further, the press bar is provided with a hose.

The utility model has the advantages that the FPC board and the partition plate are grasped by arranging the FPC receiving station and the baffle table on the machine, and the FPC board and the partition are grasped by arranging the moving components of the FPC board and the baffle to realize the automatic The partition spacing is placed between the FPCs so that the FPC board avoids stacking directly during stacking, reduces the handling inconvenience caused by direct stacking, and the problem of damage during handling, which also greatly improves the efficiency of the placement of the bulkheads Production costs, improve economic efficiency.

Additional aspects and advantages of the utility model will be set forth in part in the description which follows, and in part will be apparent from the following description or through the practice of the utility model.

Description of the drawings

The foregoing and / or additional aspects and advantages of the utility model will become apparent and readily understood from the following description of the embodiments taken in conjunction with the accompanying drawings in which:

Fig. 1 is a block diagram of an automatic board placing apparatus according to an embodiment of the utility model.

detailed description

Embodiments of the utility model are described in detail below, examples of which are shown in the accompanying drawings, wherein like or similar reference numerals refer to like or similar elements or elements having the same or similar functions throughout. The embodiments described below with reference to the accompanying drawings are exemplary and are intended to be illustrative of the utility model and are not to be construed as limiting the utility model.

In connection with Figure 1, an embodiment of the utility model provides an automatic placement of a bulkhead device for placing a partition between the FPC boards, which includes the machine 1 and the machine 1 And a moving assembly 2 for grasping the FPC board and the partition. The machine 1 is arranged adjacent to each other with an FPC board receiving station 12 and a partitioning table 11, and the partitioning table 11 and the FPC board receiving table 12 are joined together by reinforcing ribs. The baffle plate 11 is provided with a baffle stripping device including a mechanical guide 21, at least three pairs of vacuum chucks 22 symmetrically disposed on the mechanical guide 21, and a control unit 23, The vacuum chuck 22 can be moved along the mechanical guide 21 by the control unit 23. By arranging the FPC stage and the baffle table on the machine, the FPC plate and the baffle are grasped by arranging the moving components of the FPC board and the baffle to be used to automatically place the spacer spacing between the FPC , So that the FPC board in the stack to avoid direct stacking, reduce the stack should be brought about by the handling of inconvenience, and handling problems were damaged.

Preferably, the at least three pair of vacuum chucks 22 are arranged symmetrically along the longitudinal axis of the machine 1. The at least one pair of vacuum chucks 22 can be moved by the FPC picking station 12 to the baffle plate 11.

Preferably, the vacuum chuck 22 includes a gold piece 222 having a gold piece holder 221 provided at one end of the mechanical guide 21 and fixed at the upper end of the gold piece 222 at the other end thereof, and a rubber suction cup 223 provided at the lower end of the gold fitting 222. As shown in Fig. Preferably, the gold stopper

22 includes a hollow rod 2222, a gas pipe joint 2223 provided at the upper end of the hollow rod 2222, and a spring 2221 fitted to the outer surface of the hollow rod 2222, and the lower end of the hollow rod 2222 is connected to the rubber suction cup 223 connection. By providing the spring 2221, the cushioning stroke can be selected as necessary and the position of the spacer by the rubber suction cup 223 is adjusted by the gold holder 22 so as to achieve the purpose of sucking the partition.

Preferably, the baffle stripping device 3 comprises a support 31 divided on both sides of the baffle plate 11 and a pressing bar 32 having ends connected to the stand 31, respectively. The press bar 32 is provided with a hose 321. When the partitions are stacked together and the first partition is drawn from the top, the second or even successive sheets may be drawn at the same time due to the gravitational attraction between the plate and the plate, which does not meet the operational requirements. The working principle is: sucker suction partition pull up, because the role of gravity, the partition will be adsorbed at one end of the action will bend off, so as to break or reduce the gravity between the partitions to achieve a single gap The purpose of the board to absorb. By setting the hose to achieve the purpose of reducing noise.

In view of the above and in connection with the drawings, an automatic partition board placing of the utility model is provided by arranging an FPC receiving stage 12 and a partition placing table 11 on the machine 1. By setting the FPC plate and the partition The moving assembly 2 captures the FPC board and the spacer at intervals so as to automatically place the spacer spacers between the FPCs so that the FPC boards are prevented from being stacked directly during stacking, reducing the handling inconvenience caused by direct stacking, Damage to the problem, but also greatly improve the efficiency of the partition, thereby reducing production costs and improve economic efficiency.

In the description of this specification, the description of the terms "one embodiment", "some embodiments", "examples", "specific examples", or "some examples" and the like means to refer to the specific features described in connection with the embodiments or examples, The structure, the material, or the features are included in at least one embodiment or example of the utility model. In the present specification,

the illustrative expression of the above-mentioned terminology does not necessarily refer to the same embodiment or example. Moreover, the particular features, structures, materials, or features described may be combined in any suitable embodiment or example in any suitable manner.

While the embodiments of the utility model have been shown and described above, it is to be understood that the above-described embodiments are exemplary and are not to be construed as limiting the present invention to those skilled in the art without departing from the scope of the present invention. The present invention will be modified, modified, and modified within the scope of the utility model.

CLAIMS:

1. An apparatus for automatically placing a partitioning apparatus for placing a partition plate between FPC boards, characterized in that the apparatus comprises a machine table and an apparatus for grasping an FPC plate and a partition plate provided on one side of the machine A movement assembly which is arranged adjacent to each other with an FPC board receiving station and a partitioning table, the partitioning table being provided with a partition stripping device, the moving part including a mechanical guide groove, At least three pairs of vacuum chucks on the mechanical guide and a control unit, the vacuum chuck being movable along the mechanical guide under the action of a control unit.

2. An automatic partitioning apparatus according to claim 1, wherein said at least three pair of vacuum chucks are arranged symmetrically along an axis of the machine in the longitudinal direction of said machine, said at least one pair of vacuum chucks being receivable by FPC The movement of the table to the partition board.

3. An apparatus for automatically disposing a separator according to claim 2, wherein said vacuum chuck includes a gold piece having a one end disposed on the other end of the guide groove and fixedly connected to the upper end of the gold piece and a gold frame provided at the lower end of the gold Rubber sucker.

4. An apparatus for automatically placing a partitioning apparatus according to claim 3, wherein said gold member includes a hollow rod, a gas pipe joint provided at an upper end of the air rod, and a spring fitted to the outer surface of said hollow rod, And the lower end of the hollow rod is connected to the rubber sucker.

5. An apparatus for automatically placing a partitioning apparatus according to claim 1, wherein said partition removing means comprises a support which is provided on both sides of said partition plate and both ends are connected to said branch Seat bar.

6. An automatic partitioning apparatus according to claim 5, characterized in that the press bar is provided with a hose.