What the invention claimed is:

1. A process method for laser removal of substrate solder mask, which is to process a substrate through a laser with controllable energy, laser processing machine MT contains laser device LE and movement mechanisms, laser device LE has not only laser beams but also camera module PA, movement mechanisms enable the substrate to be processed to move relative to the laser device LE, the process method for laser removal of substrate solder mask comprising the steps of:

S101: providing a substrate where the surface of said substrate is provided with solder pads;

S102: covering the surface of said substrate and said solder pads with a solder mask, where the part of said solder mask facing the surface of said substrate is defined as a shielding part and the part of said solder mask facing said solder pads is defined as a clearing part;

S103: reading the QR-Code of a plate production part number on said substrate through at least one camera module;

wherein the data of said solder mask is imported into said CAD/CAM data, and the data of said solder mask is converted into a positive image, a negative image or a graphic to obtain a construction graphic; said substrate is divided into multiple areas to be processed through said CAD/CAM data, and then said laser beam is used to remove the clearing part of each of the areas to be processed according to a preset rule;

S104: automatically importing data of a CAD/CAM data to a laser device, where said CAD/CAM data corresponds to said plate production part number, according to a preset rule, generate a QR-Code of the production process code of each unit and burn the QR-Code into the designated position of each unit at the same time when construction starts through the laser emission of laser device LE;

S105: performing stripping operation on said clearing part sequentially according to said CAD/CAM data through a laser beam, the laser device LE emits laser light to remove the solder mask, thereby exposing the solder pads below the solder mask;

S106: making said solder mask form at least one hollow portion;

the clearing part of the solder mask opposite to the solder pads is removed, thereby forming a hollow portion of the solder mask, the remaining solder mask serves as the shielding part facing the substrate;

S107: taking pictures of said substrate through said at least one camera module and taking out a processed substrate picture;

S108: comparing and judging whether said processed substrate picture is the same as said CAD/CAM data; and

S109: completing the substrate processing operation if said processed substrate picture is the same as said CAD/CAM data.

2. The process method for laser removal of substrate solder mask as claimed in claim 1, wherein in the step of comparing and judging whether said processed substrate picture is the same as said CAD/CAM data, if said processed substrate picture and said CAD/CAM data are different, use said laser beam to perform the stripping operation on the clearing part for the difference.

3. The process method for laser removal of substrate solder mask as claimed in claim 4, wherein after obtaining said construction graphic, calculate the overlapping area of the laser spots according to the laser spot size and energy of said laser device, and then translate a laser dot matrix.

4. The process method for laser removal of substrate solder mask as claimed in claim 1, wherein the laser light emitted by said laser beam is a high-frequency laser beam above the millisecond level.

5. The process method for laser removal of substrate solder mask as claimed in claim 1, wherein the type of said laser beam is selectively to be CO2, Yag or green laser according to the characteristics of the material to achieve the effect of removing solder mask without residue or carbonization.

6. The process method for laser removal of substrate solder mask as claimed in claim 1, wherein said laser processing machine MT contains laser device LE, wherein said laser beam is emitted by multiple laser light sources, which respectively perform stripping operations on said clearing part in sequence according to said CAD/CAM data, and each said laser light source is responsible for a different area.