Standard Operating Procedure (SOP)
ADT7100 Dicing Saw
(BE-04)

In case of emergency please call 911

For any other major safety concern contact EHRS at: 215-898-4453 or via email: ehrs@ehrs.upenn.edu

If there is an error on the system/tool please report it on IRIS, we will take care of it

Please **DO NOT** run diagnosis without a staff member’s approval

General safety tips and common mistakes

1) Make sure that you are logged into the tool on IRIS before use. If you do not log in, you cannot run the tool.
2) Resin Blade: Glass and Si wafer
3) Ni Hub Blade: Si wafer
ADT7100 Dicing Saw

Procedure Overview

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<td>1. Log-in on the IRIS scheduler</td>
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<th><strong>2. Start Up</strong></th>
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<td>2.1. Cold Start</td>
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<td>2.1.1. Open the valves of water for Spindle and clean dry air (CDA).</td>
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<td>2.1.2. Turn on the main power.</td>
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2.2 Sample Preparation
2.2.1. A wafer is mounted using WM 966 Manual Wafer Mounter shown.

2.2.2. Turn on power and vacuum

2.2.3. Open a lid, and a wafer and a metal ring are placed on the chuck. A top side of the wafer is placed on the bottom side.
2.2.4. Make sure that stoppers are inserted into notches of the metal rings.

2.2.5. A blue tape is withdrawn, and attached to the metal frame.

2.2.6. Close a lid. Then, a cutter on the holder is down, and rotates twice. The blue tape should be cut \textit{from the center of the tape}. The sample is removed from the tool.
2.3. Log-in
2.3.1. A log-in dialog box will appear.
2.3.2. Type User name and password, and click the "OK" button.
  - User: Engineer
  - Password: engineer
  - Check the box for "Init System", or you have to initialize the system manually after log-in.

2.4. Main Menu
2.4.1. A main menu appears.

2.5 Assign Jobs
2.5.1. Click "Assign Jobs".
2.5.2. The following screen appears.
2.5.3. Choose the recipe, and assign it by clicking the "Assign" button.
2.6 Recipe change
2.6.1. Click "Recipe Builder", and the following window appears.
2.6.2. Change the parameters, and save it, if necessary.

Note: Input “Blade type”
Wafer Shape: Circular or rectangular
If rectangular is input, x and y should be input.
Cut: Index (distance between cuttings)
Cutting speed: 6-7 for single wafer
1-2 for double wafer

3. Dice Wafer
3.1. Click "To Dice" button on the right side.
3.2. The following window appears.
3.1 Load Wafer
3.1.1. Open the Load/Unload Cover.

3.1.2. Place a Workpiece on the Cutting Chuck by inserting stoppers into notches of the metal ring.

3.1.3. Close the Load/Unload Cover.
3.1.4. Move the cursor to the red area in the screen.

3.1.5. Choose “Load Workpiece” from the following drop down menu, and the workpiece is loaded into the tool.
3.2. Alignment
3.2.1. Move the cursor to the red area.

3.2.2. The following drop-down menu appears. Choose "Align", and "Manual" or "Auto".

3.2.3. Align the right side.
3.2.4. Align the left side.

3.2.5. Designate the cut point.

3.2.6. The sample is rotated at 90 degree. Designate the cut point.

3.2.7. Dicing a wafer starts.
3.3. Unload Wafer
3.3.1. Click "Unload Workpiece" in the drop-down menu of section 3.1, when dicing is finished.
3.3.2. Take the workpiece out of the tool.

4. Shut Down
4.1. Close the valves of water for Spindle and CDA.

5. Check-out
5.1. Log-out on the IRIS scheduler

Feel free to contact the staff members with any questions about your process and the tool.

Last modified: 12/1/2021 by Hiromichi Yamamoto