

CAPACITIVE SENSORS CASE STUDY

VIBRATION TEST FOR A SLICING MACHINE

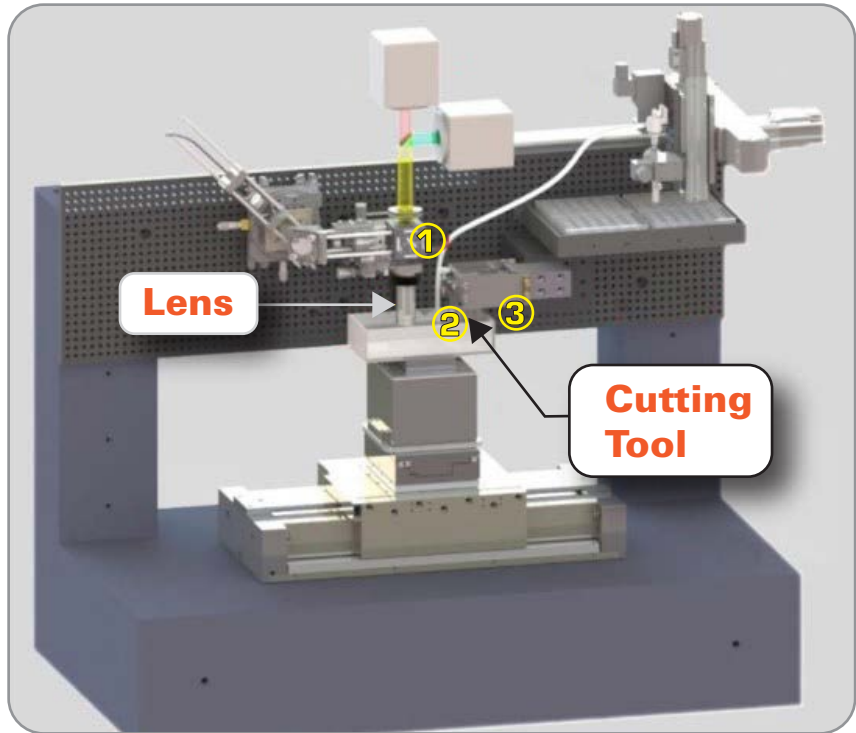


APPLICATION:

Vibration monitoring in three axes for a lab rat brain sample slicing machine in a research center.

SENSOR SOLUTION:

Lion Precision C8-2.0-2.0, C25-21-2.0 capacitive probes and CPL190 drivers.



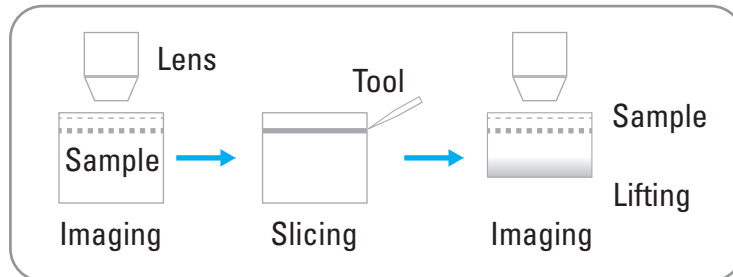
The probes are mounted at 1, 2, and 3 around the cutting tool in three axes.



BENEFITS:

A reliable slicing machine increases efficiency and saves costs for lab rat brain slicing samples.

- Saves \$20 for each brain sample identified as out of spec.
- Increases efficiency by identifying out of spec samples.
- Improves test results by ensuring all measured samples are valid.



IN LAB RAT BRAIN IMAGING FUSION RESEARCH

the brain sample is cut layer by layer using a slicing machine, and then images are taken of each layer. The slice sample needs to be a very thin layer with a uniform thickness. However, the slicing machine can vibrate during cutting. Even a small vibration causes uneven thickness, leading to test result error in the next imaging stage.

LION PRECISION NON-CONTACT CAPACITIVE SENSORS

are mounted in X, Y and Z orientations around the slicing tool as a final inspection by the slicing machine. Analyzing the vibration data, the user can determine if the slicing machine performance is acceptable. Machines with unacceptable vibrations can be adjusted and corrected. Lion Precision sensors can also be used for troubleshooting and optimization of the slicing operation.