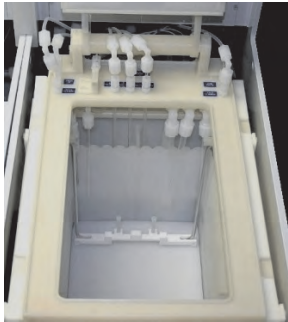


Advanced Solutions for MEMS Manufacturers

MEMS Processes and Equipment



Optimized tanks with advanced sensing for process control

Akron Systems is a company with more than 20 years of experience in providing wet process expertise to the semiconductor and related industries. The company specializes in innovative surface conditioning processes using batch and single wafer products for today's most challenging applications.

The company has a long history of handling sophisticated micromachining applications for MEMS manufacturers.

Applications for MEMS Manufacturers

- Surface micromachining
- Bulk micromachining
- Cleaning (including deep features)
- Sacrificial etching
- Resist removal – acid and solvent
- Metal etching

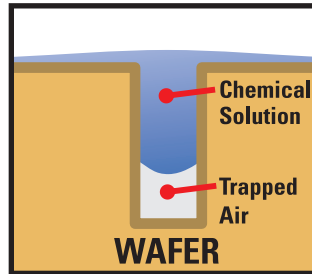


6330 Hedgewood Drive, Suit 150, Allentown, PA 18106 USA

Vacuum Modules for High AR MEMS

Increasingly small high aspect ratio geometries are difficult to process

The Problem

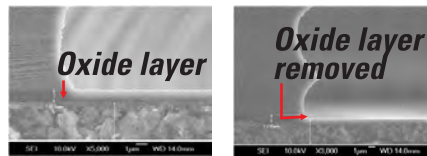


Trapped air cannot be evacuated from high aspect ratio trenches using typical immersion process methods

NAURA Akron Expert Solution

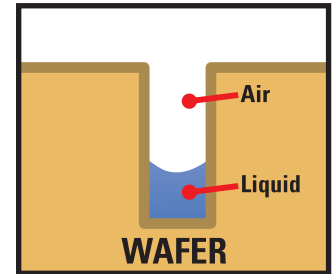
“Prime” the wafers with fluid in a manner that prohibits air pockets from forming in the first place.

With Vacuum



BOE process with **Vacuum Priming** removes the 1 μm of oxide that process without priming leaves behind

The Problem

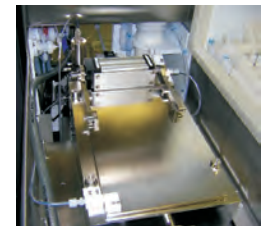


Trapped post process fluid cannot be evacuated from high aspect ratio trenches using typical drying methods

NAURA Akron Expert Solution

LuCID3™ dryer removes 100% of all visible liquid

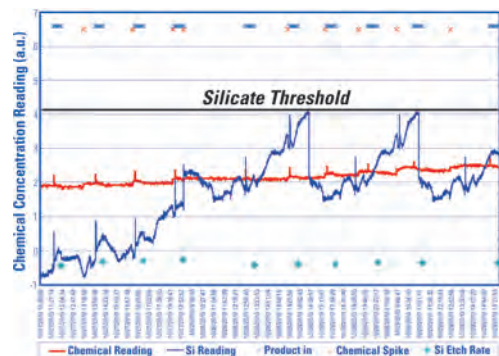
The finish stage **Vacuum Dryer** removes remaining liquid



Safely, gently, but most importantly:

Completely Dry!

Uniform and Controlled Silicon Etching for Micromachining Applications



- Sensor used to monitor and control chemical composition
- Maintains Si below a threshold value to provide stable etch performance
- Specially designed tanks and flow control systems
- Simplifies tool setup and significantly reduces miss-processing
- Systems for controlling impact of H₂ out-gassing on etch uniformity