

Scratching the surface

Developing a custom purge system for a solar cell wet processing tool using special solvents to surface-treat silicon wafers.



Project Brief

To develop a special purge system for a photovoltaic cell wet process tool with two separate purging functions during the operating cycle.

Challenges

Space limitations - the process equipment had limited space available inside for the purge system, so a compact solution was a must

Environment - the wet process used a proprietary blend of solvents that was both corrosive & flammable

Control - the purge system was required to interface with the process tool software for activation and operating mode selection

Outcome

A highly custom, twin parallel MiniPurge system on a special chassis to fit the allocated space

Teflon process connections to reduce the risk of corrosion in the event of any back-migration of solvent vapour

Purge system interlocks to the process tool control system for purge mode selection and stop/start

Purge flow measurement close to the process chambers using special teflon orifice devices feeding back to the MiniPurge

Expo Products and Services

MiniPurge Type X

IECEX, ATEX & UL certified purge and pressurization systems for Zone 1, Class I Div 1 applications



Features

- Global approvals
- Purge flow capacity up to 900 NI/min
- Leakage Compensation or Continuous Flow
- Stainless steel enclosure construction

Expo's Minipurge type X range provides a full purge and pressurization solution for electrical enclosures and other equipment installed in Zone 1 or Class I Div 1 hazardous environments. With a range of flow capacities up to 900 NI/min, the systems are suitable for large enclosures up to 5.4m³ volume.

[Click here](#) for more information.