



## Your Hex Metal Problems STOP Here!

By using our SpeedHex® Solutions



### Gas Bypass

Gaps inherent in hex metal design combined with refractory shrinkage, lead to direct pathways to the shell.



### Corrosion

Due to prolonged exposure to catalyst and process gases, hex becomes sensitized and will lead to stress corrosion cracking.



### Biscuiting

Compacted cells of refractory get pushed and squeezed, and over time, start breaking off biscuits at the hot-face.



### Sheet Spalling

When welds fail due to bypass and stress cracking, sheets of hex will break and spall.



### Bulging

Bulging is caused by inherent stresses in hex, and causes localized hotspots and turbulence



### Coke Jacking

Once coke gets behind and builds up, it forces the lining away from the wall.



### Carburization

Exposure to bypassed gases will cause carburization and lead to structural degradation.



### Poor Repairability

Hex metal is notoriously hard to repair and allows for a heavily contaminated shell surface.

### Hex Metal Installation is Time-Consuming

Repairs that still utilize hex metal are slow and require a lot of preparation, such as cutting to size and rolling to the appropriate curvature. Installation must be done manually, is inconsistent and slow.

When doing repairs, time is of the essence.



# Discover our SpeedHex® Solutions

## Application Examples

We have products for each component of an FCC because we know each part has its own unique problems.



SpeedHex Refractory Termination



SpeedTab® on 90° Corners



SpeedVee® & SpeedTab Mega on Corners



SpeedTab & SpeedHex on Varying Bullnose



SpeedTab on Pipe Edges

## SILICON is a Full Service Solutions Provider:

- Engineering – Custom solutions for simple & complex repairs.
- Production – State-of-the-art refractory anchoring and Rapid Arc Welding production facility.
- Installation – Dedicated crews that supervise and/or install refractory anchoring systems.



## SILICON SUCCESS STORIES



### Urgent Mobilization in South Africa

An emergency service was requested on a Friday night and we arrived the following Monday. A catastrophic failure in the cyclones caused by hex metal lead to an urgent need for SILICON's SpeedHex and Rapid Arc Welding technology.

Due to the quick response and proven repair technology, the unit was back up and running within two weeks.

*Scan for more stories on fast installation and high reliability*



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