

Application Story

Lite-Cell Roof @ FIB SA, Belgium

Customer:	FIB BELGIUM SA
Location:	Belgium
Installation:	January 2008
Operating Temp:	1,450°C
Energy source:	Gas



FIB is the world's largest manufacturer of continuous lines for the steel wire industry and the only one to supply its own burner systems, the famous FIB premix system. The major part of FIB's products are fully designed and manufactured in their premises.

FIB moved to a new facility in Saintes, Belgium. The new facility also includes a new furnace for the manufacturing of burners and refractory parts used on FIB's installations.

In a joint project, Cellaris and Insulcon B.V. devised a new LTM (Low Thermal Mass) suspended roof concept for the new furnace, which is 1.5m wide, 1.8m deep and 2m high. The roof faces extreme abrasion and reducing conditions due to the side wall burners, located direct below the roof surface.

The main reasons for selecting Lite-Cell as the roof's hot face in this kiln were **energy savings, stability, reduced maintenance** and the fact that Lite-Cell is **fiber-free**.

The Solution

The solution is based on a hot-face of 40 mm **Lite-Cell 170-A2** boards with overlapping Z-joints. 250 mm blankets serve as back insulation. The whole construction is held by special developed 1700 °C resistant ceramic anchors and washers (4 anchors per board)



The Lite-Cell roof after the installation

Results

The furnace has been in operation since February 2008. It is highly utilized and works non-stop. All FIB's objectives were achieved with great success:

Energy savings – 25% savings compared with dense suspended roof lining!

Stability – The roof is in operation for 18 months already!

Production Yield - No maintenance (vs. standard roof with ceramic fiber module)!

Health & safety - No exposure to ceramic fibers!



FIB Furnace



The Lite-Cell roof after 18 months of operation