

Kilns

Project Name: Tunnel Kiln firing Face Brick

Location: Chesterton, UK

Furnace Information

Furnace Type: 1978- vintage Lingl tunnel kiln

Fuel Type: Gas

Substrate: Fireclay

Operating Temp: 1920 - 2100 °F (1049 - 1149°C)

Background: The total length of the kiln was 162 meters. This kiln has a capacity of 50 million bricks per year. The fireclay refractory coated was in excellent condition, with few spalls and cracks, although the surface was iron stained. The customer wished to evaluate Emisshield® for its energy savings potential

Application Information

The coating was applied to the walls, crown and burner blocks in the 50 meter soak zone only. This application was completed in January 2006.

Emisshield® Benefits

The use of the coating resulted in a more even temperature distribution. One product showed a 100% yield in the Emisshield®-coated kiln. The push rate could be increased from 35 minutes to 30 minutes, a 14% improvement in productivity with no adverse affect on color or physical properties. After several months of production, an energy balance and audit showed that natural gas savings were in the 8-10% range, the greater savings occurring at the higher push rates.



(US Patent 6,921,431 and Other Patents Pending)
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