

FCB Zero-NOx Preca



Hot spot and staged combustion

- Hot spot precalciner with precombustion chamber and innovative downdraft design
- Efficient combustion of all types of fuels
- Designed to burn coarse alternative solid fuels, with no CO emission
- Zero NOx production and very low final level of emissions
- Implementation up to 6,000 tpd, with 1 combustion chamber

Increase the production and cut NOx emissions while getting the burning line more stable

ADVANTAGES

Low-NOx emissions

When optimized, FCB Zero-NOx Preca does not produce any NOx and, in many cases, avoids the use of an SNCR injection system

Ignition stage under reducing conditions

The conical quarl of the combustion chamber stabilizes ignition in conditions, which avoids the production of NOx

High performance multichannel Pillard PrecaFlam™ burner

The Low-NOx burner creates a hot spot for easy ignition of any fuel

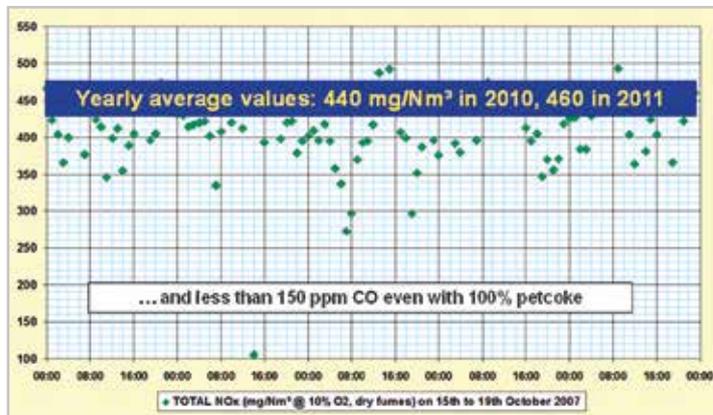
Smooth and safe operation

The controlled flame and progressive mixing ensure the safe use of difficult fuels and alternative fuels, and a high burn-out ratio with long life of refractory linings

Tertiary air damper

Dampers with vertical axles are air-cooled for high temperature tertiary air

MEASUREMENT AT HOLCIM CARTAGO, COSTA RICA



Hourly NOx emissions at Chimney Stack

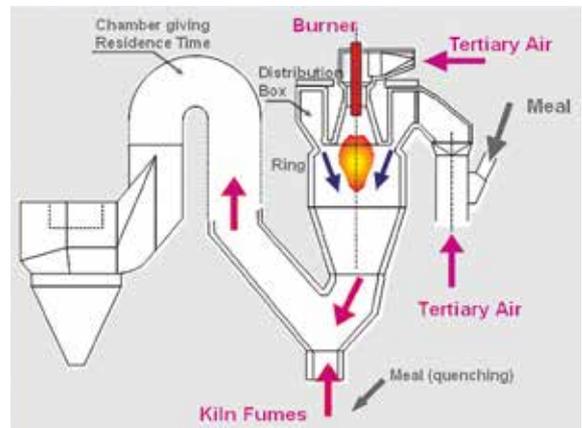
500 mg/Nm^3 Less than mg/Nm^3 at 10% O_2 NOx emission at the chimney stack (petcoke firing)

200 mg/Nm^3 at 10% O_2 with SNCR injection NOx emission at the chimney stack without CO emission



Alternative fuels preparation unit

- At Holcim-Aspasco (Hermosillo, Mexico), FCB Zero-NOx Preca burns 50% of scrap tyres
- At Holcim (Cartago, Costa Rica), up to 70% of coarse ASF can be fed directly to the precalciner burner



- Staged combustion for low emissions
- Designed to burn difficult solid fuels and a high proportion of ASF
- Low maintenance
- Stable combustion ensured by multi-channel burner
- Environmentally friendly with Zero NOx emission from the precalciner