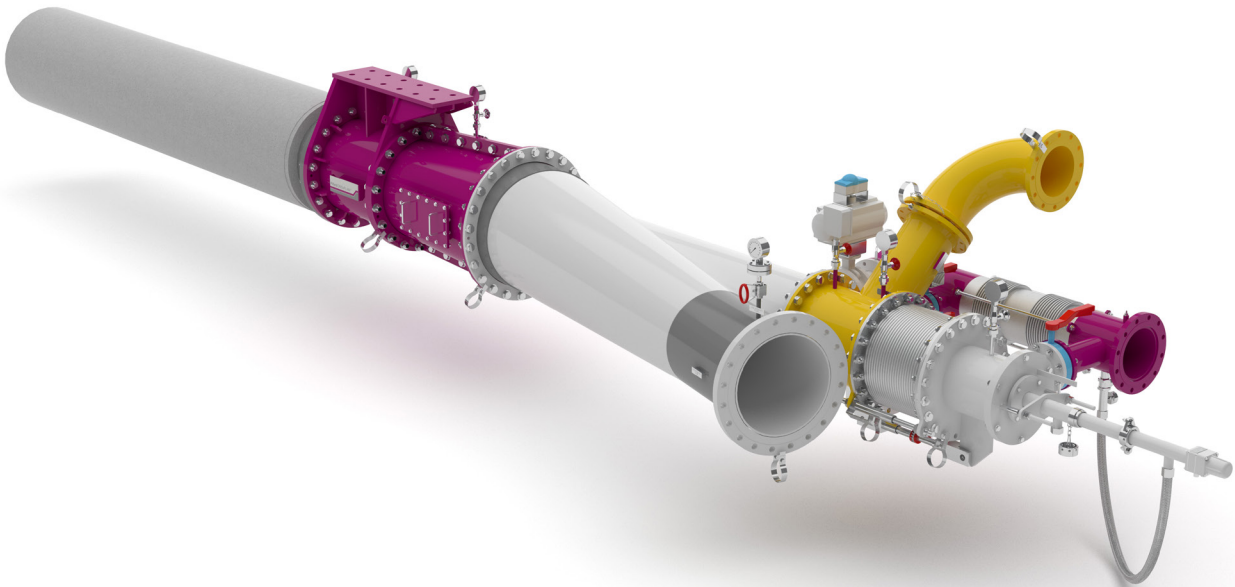


Pillard DNO_xFLAM™

Rotary kiln burner



Performant NO_x reduction technology for direct firing systems

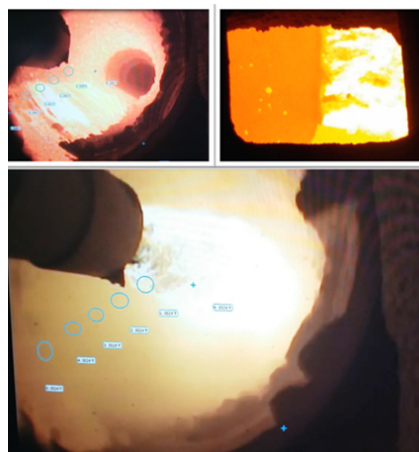
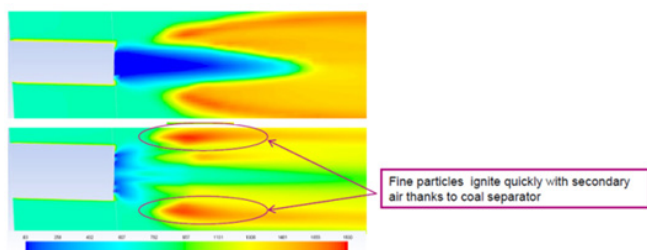
- Up to 20% NO_x reduction without additional operational costs
- Suited for all pulverized solid fuels direct firing (coal, lignite, petcoke)
- Optimized thermal efficiency operation
- High flame stability and safe ignition
- Multi-fuel design: gaseous, liquid and solid fuels co-firing (NG, DO, HFO, alternative solid fuels)

Pillard DNOxFLAM™ kiln burner is Fives' low-NOx solution for rotary kilns with direct firing systems

PILLARD DNOxFLAM™ PRINCIPLE

Pillard DNOxFLAM™ is based on an exclusive patented technology, combining PSF (Pulverized Solid Fuels), air staging design and PSF particles segregation, resulting in:

- Lower NOx generation
- Quicker PSF ignition
- Reduced black plume length
- Higher flame stability
- Improved product quality thanks to thermal profile and uniform coating formation
- Savings in specific consumption



LOW-NOx SOLUTION

Thanks to a patented and integrated design without moving parts, Pillard DNOxFLAM™ uses a PSF and combustion air staging principle leading up to 20% NOx reduction compared to conventional direct firing monotube burners. Its simple conception enables a low pressure drop generation (below 20mbar), no additional operational costs while insuring a high combustion efficiency.

A VERSATILE AND FLEXIBLE BURNER

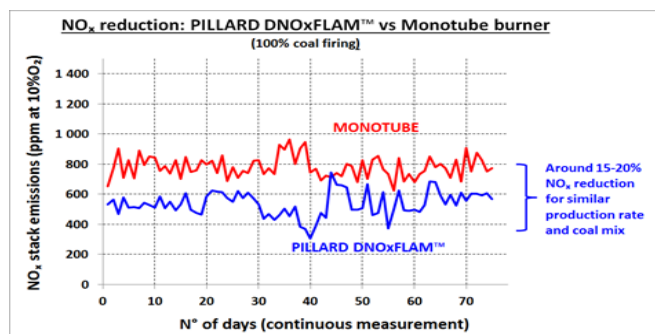
Pillard DNOxFLAM™ kiln burner allows co-firing:

- Liquid and gaseous fuels: natural gas, DO, HFO
- Alternative solid fuels

It includes dedicated devices to increase burner flexibility:

- Flame shape and thermal profile adjustments
- Momentum adjustment to maximize pet coke firing

Pillard DNOxFLAM™ can be installed in any existing direct firing installation without replacing existing equipment's such as silos, transport lines, coal mills or mill fans.



APPLICATIONS

- Cement rotary kilns
- Lime rotary kilns
- All other mineral process using rotary kilns (Al, Li, Ni)

A DESIGN ENSURING AN EASY MAINTENANCE

Pillard DNOxFLAM™ provides a dedicated access door to the PSF circuit for an easy inspection and quick maintenance.

Key features

Direct firing burner	For all types of coal and pet coke
Low NOx emissions	Up to 20% NOx reduction without additional operational costs
Range of heat release	Up to 100MW per burner
Liquid and gaseous fuels co-firing	NG, DO, HFO, Alternative Solid Fuels
Low burner pressure drop	≤ 20mbar
Improved burner flexibility	Flame shape and momentum adjustment via dedicated devices

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