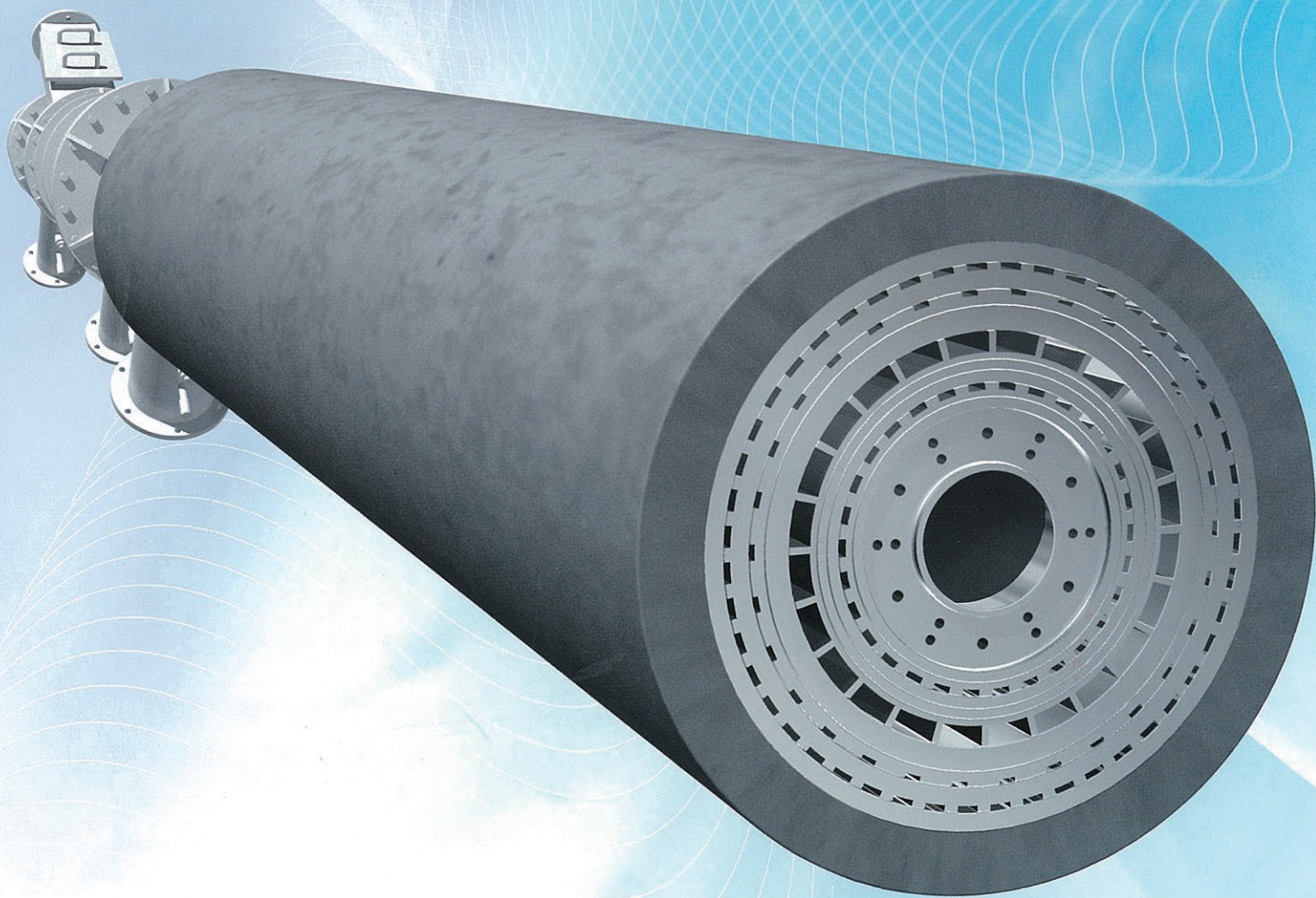


TMP Burner

Taiheiyo Multi Purpose BURNER



- **Utilization of Low Grade Fuels**
- **Utilization of Recycled Fuels**
- **Low NOx Operation with Complete Combustion**



Low NOx TMP Burner

TMP Burner has been developed in close cooperation with Taiheiyo Cement Corporation

Salient Features

Utilization of Low Grade Fuels

Suitable for low grade fuels, such as Petcoke and Anthracite Coal, thus saving in cost of fuel.

Utilization of Recycled Fuels


Suitable for recycled fuels, such as Waste plastics, Waste oil, etc.

Low NOx operation with Complete Combustion

Assures Low NOx combustion by making optimum NOx reducing zone in flame, with decreased primary air ratio.

Performance

Performance result at Taiheiyo Cement Plant, Japan

Fuel		NOx level in kiln	
		Conventional Burner	TMP Burner
Fossil fuel	Alternative fuel	 30 ~ 40% decrease	
Bituminous coal, Petcoke, Anthracite coal	Recycled fuel		

Level of NOx is influenced by the kind and proportion of fuels.

Kinds of Alternative fuels

☐ Waste plastics
 ☐ Waste oil
 ☐ Wood chips
 ☐ Others

TMP Burners are tailor-made for required purpose.

Comparison of Burner Flames

Conventional Burner



TMP Burner



A : Volatilization zone

B : NO_x reducing zone

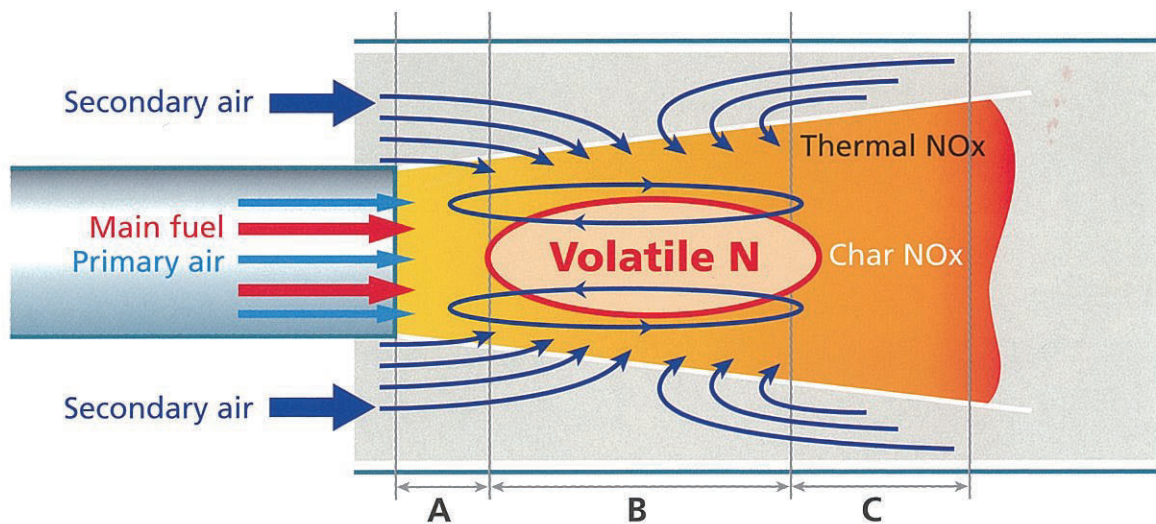
C : Combustion completion zone

Main Features of **TMP Burner**

- | | |
|--------------------------|----------------------------------|
| ■ Short range of Zone A | ➤ Rapid ignition |
| ■ Wide range of Zone B | ➤ Reducing NO_x |
| ■ Optimization of Zone C | ➤ Complete combustion |

Conceptual Drawing of Kiln Burner Flame

By controlling both primary air and main fuel, the burner flame and the temperature could be controlled at optimum condition, while maintaining low NO_x combustion.



A : Volatilization zone

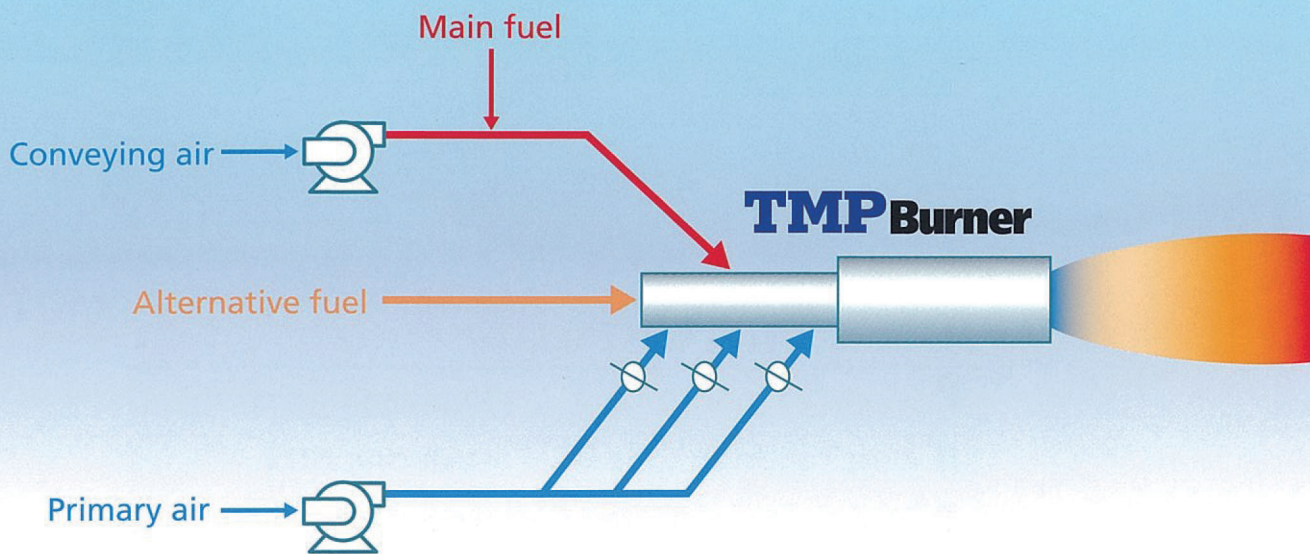
B : NO_x reducing zone

C : Combustion completion zone

Burner application for :

- Cement Kilns
- Lime Kilns
- Other Rotary Kilns

Basic Flow Diagram



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