

Metso

Hydrogen & natural gas burners for traveling
grate pelletizing plants

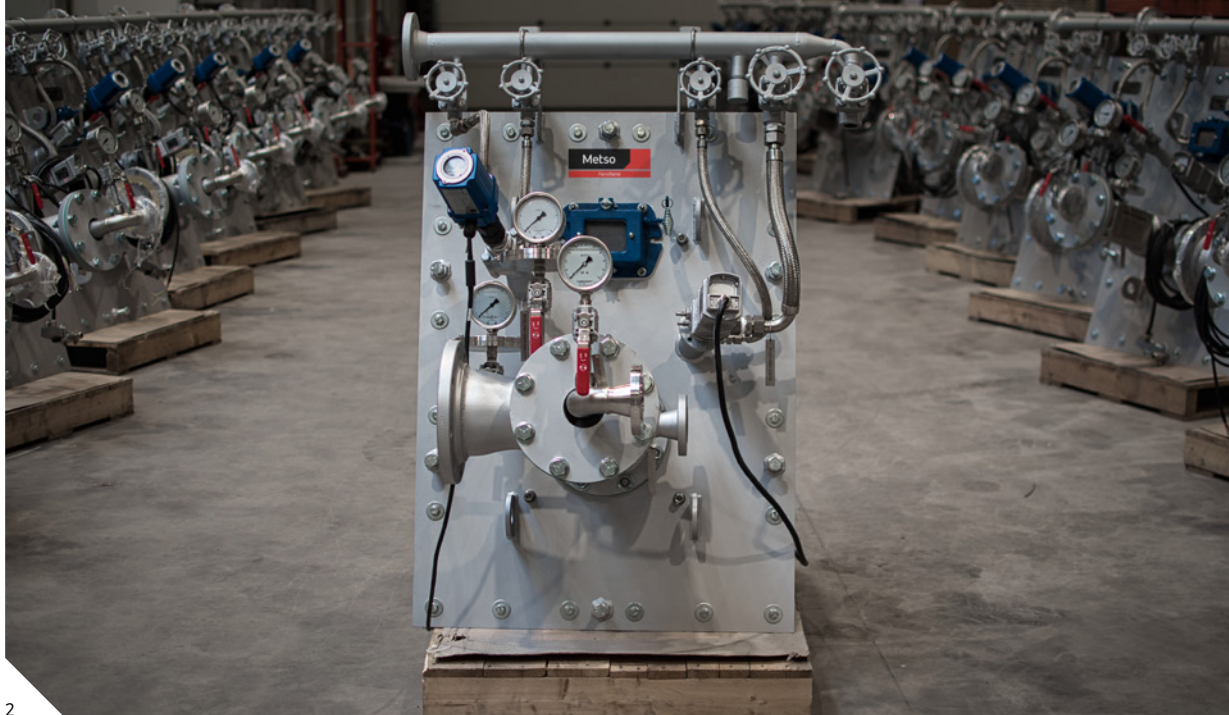
Ferroflame™ LowNOx



Designed by the world's leading pelletizing plant supplier to meet the future demands for your pelletizing plant

Ferroflame™ LowNOx burner has been designed using the latest techniques and validated with natural gas and hydrogen. It can reduce NOx emissions by up to 80% compared to traditional burner designs. Moreover, the lower NOx emission targets can be achieved at lower Capex and Opex levels than competing solutions.

The Ferroflame LowNOx burner can also increase product quality through improved temperature uniformity in the furnace. Suitable for use with gaseous and liquid fuels, the Ferroflame LowNOx is a reliable and robust burner solution with excellent cold start up characteristics. That meets the requirements for new pelletizing plants as well as extending the potential life of existing plants. Small-scale trials with hydrogen have proven an excellent burner performance.

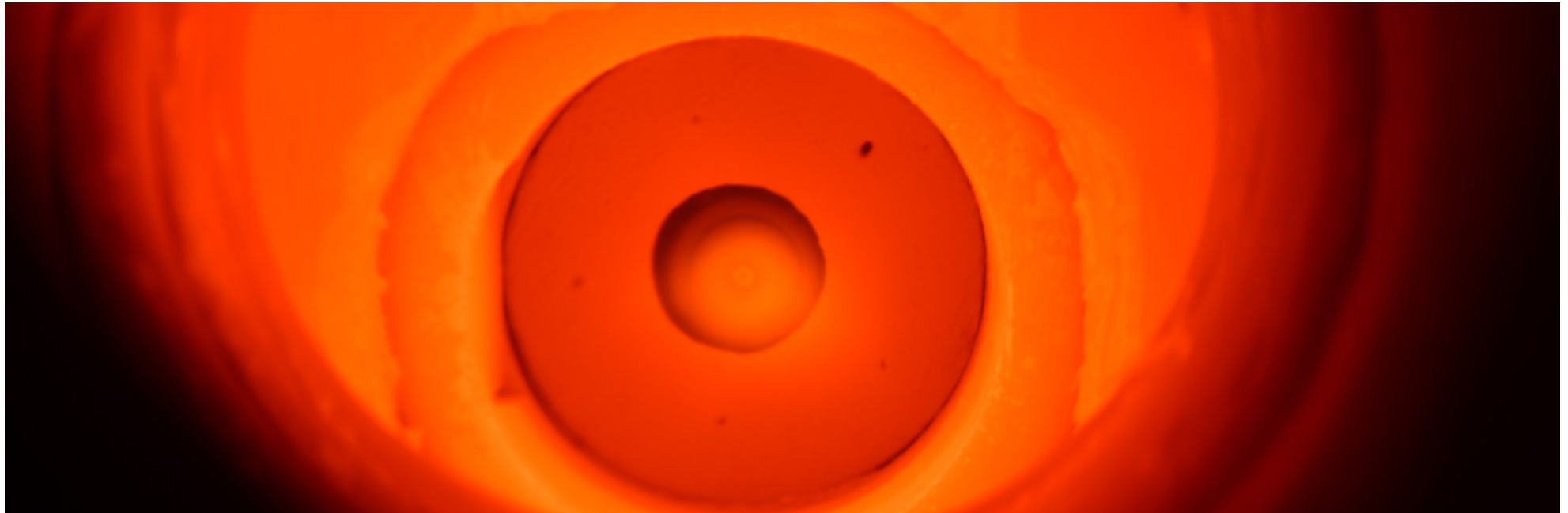


Benefits

- Hydrogen as carbon free fuel to support decarbonization
- Substantial reduction of NOx emissions by up to 80% with natural gas
- Low thermal penalty on natural gas ~ 10%
- Increased product pellet homogeneity and quality
- Increased refractory lifetime
- Optimization of NOx vs. Opex balance with digital solutions
- Proven technology
- Easy retrofit of existing plants

An effective way to minimize CO₂ and NOx emissions from the combustion process

Metso
PLUS



Attain CO₂ and NO_x emission targets in a cost-effective manner

A tested and proven solution

- Developed in small and full-scale tests in laboratory and on-site as well as using CFD simulations
- Proven for natural gas, hydrogen, diesel and coke oven gas
- Successful plant operation with natural gas at first customer since 2019

Designed to meet your needs

- Customized for your needs and can easily be retrofitted in existing plants
- Can be supplied in conjunction with the Burner Management System (BMS) and fuel handling system to meet the latest standards
- Suitable for Capex as well as Brownfield and upgrade projects

Hydrogen-variant available

- Tested with pure hydrogen in small-scale
- Excellent burner performance and low NO_x emissions
- Metso offers the Ferroflame LowNO_x for hydrogen for all Traveling Grate Pelletizing Plants
- LowNO_x burners for natural gas can be easily converted to operate with up to 100% hydrogen

Metso Advantage

Own proprietary Ferroflame™ burner family for traveling grate pellet plants:

- Standard burners
- Hydrogen burners
- LowNO_x burners
- Convertible gas burners, prepared for later easy conversion to LowNO_x operation

Services

- Combustion audit and process evaluation
- Modelling (CFD and physical)
- BMS and flame safety
- Burner ancillaries (ignitors, pilots, support systems, fans)
- Gas and oil valve trains
- Fuel system design
- SNCR systems
- Site survey, process audit, detail design, training, spare parts and many such services available on request

Metso is a frontrunner in providing sustainable technologies, end-to-end solutions and services for the aggregates, minerals processing and metals refining industries globally. By helping our customers increase their productivity, improve their energy and water efficiency and environmental performance with our process and product expertise, we are the **partner for positive change.**

Metso

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