

Low NOx Injectors for consistent baking level



The ultimate technology to boost your baking performance

- NOx emission reduced by 3 compared to other technologies
- Reduction of baking level deviation in a pit by 20%
- A simple and light design, easy to implement

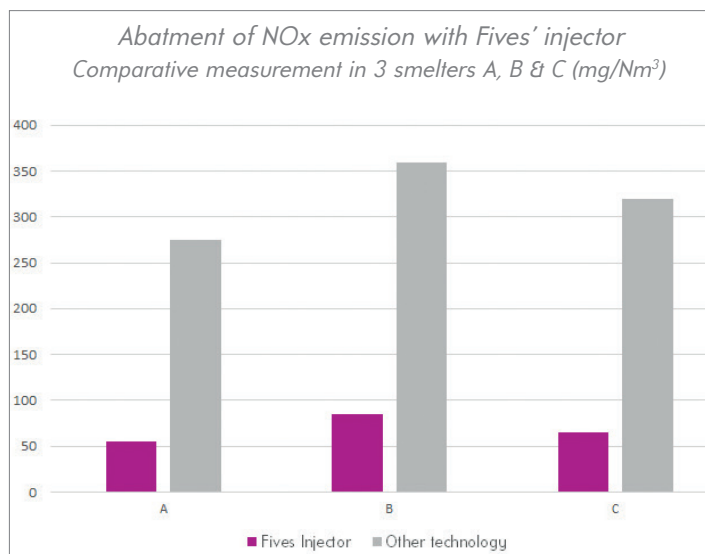


Gas injection technology proven on baking furnace after selection on test bench

Helios, the Fives' Firing Control System is a low NOx solution which saves energy during anode baking by optimizing the combustion of organic compounds and improving process efficiency

HISTORIC

A full scale flue wall bench test for injector and combustion characterization was set up. Two years of Research & Development were necessary to identify the best-in-class solution to reach consistent baking level and reduce NOx emissions



-3 kgC/tAl | Net Carbon Consumption

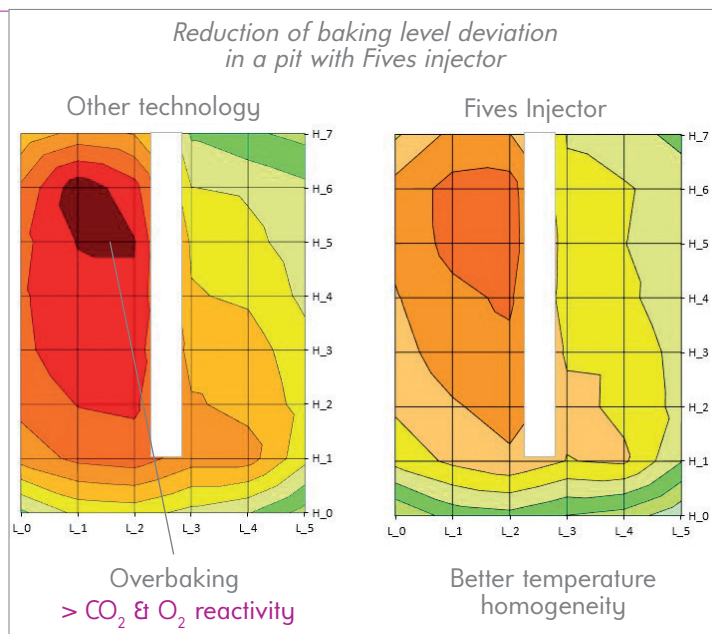
<100 mg/Nm³ | NOx emission

-5% | Gas consumption (GJ/tba)

+20% | Flue wall service life

SOME REFERENCES

Aluminerie Alouette, Canada (8 fires) - Aluminium of Greece, Greece (4 fires) - Century Vlissingen, The Netherlands (2 fires) - Rusal, Volgograd (3 fires) - Zhongwang 1 and 2, P.R. China (12 fires)



IMPLEMENTATION OF THE SOLUTION

- Replacement of existing injectors on any open type baking furnace technology
- Fives' assistance for equipment fine tuning and performance evaluation

OPERATIONAL ADVANTAGES

- Decrease of peak temperatures in the pit with positive impact on refractory, anode desulphuration, anode reactivity
- Maintenance cost reduction: wear part limited to the end nozzle with life duration > 2 years
- Abatement of NOx emissions by 1/3

BENEFITS AT A GLANCE

- Reduction of Net Carbon Consumption
- Increase of flue wall service life
- Gas consumption optimisation
- Compliance with the stringest environmental standards

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Industry can do it