



Test Report N. GM/1.2018

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Test: testing of degradation of **NO_x** in air on a **KlinkerTech** sample

Milan 05/04/2018

Date of receipt	16/03/2018
Analysis start date	26/03/2018
Analysis end date	28/03/2018
Material	Ceramic Materials
Sample name	Ceramic File KlinkerTech
Test information	<ul style="list-style-type: none">• Test of photodegradation of NO_x in air.• Tested sample: collected and cut in a 2x20 cm sample from an original slab, intact in all its parts, randomly chosen from a production batch.• Pre-treatment methods: in accordance with ISO 22197-1, the sample was UV-A irradiated for 6 hours and then immersion in deionized water for 2 hours.• Light source: UV-A Jelosil 500, intensity 2.0 mW/cm².• Exposure time: 6 h.• Initial concentration of NO_x: 1000 ± 100 ppb in synthetic air.• Type of reactor: for research purposes. Results published in international scientific journals ^{1,2,3,4}.• Analytical method: chemiluminescence (SERINUS 40).• Reproducibility: the measurement was

¹ J. Phys. Chem. C 111 (2007) 13222

² Nanoscale Research Letters 4 (2009) p.97

³ Cement and Concrete Composites, 36 (2013) 116-120

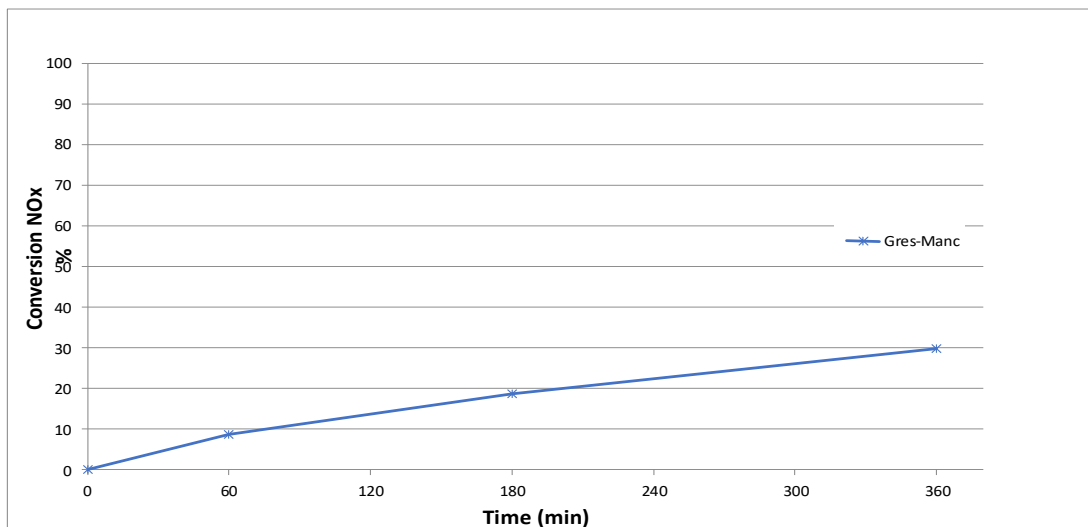
⁴ Chemical Eng J, 261, (2015) 76-82



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| | repeated on no. 3 samples, randomly chosen from # 5 different samples. <ul style="list-style-type: none">• Sampling made by customer. |
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Results

The performance towards the degradation of NO_x for the material under test is here reported.



Conclusions

The Ceramic File KlinkerTech material appears to be **slightly active in the photocatalytic degradation of NO_x in air**. In reference to the experimental data obtained after 6 hours of testing, the percentage of degradation of NO_x is equal to **29%**.

The Scientific Director

Prof. Claudia Letizia Bianchi