

## **Influence of a Spent Fluid Catalytic Cracking Catalyst (FCC) in the Microstructure, Resistance and Hydration Heat of the new Blended Mortars**

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This work presents the influence of a by-product from the oil companies (FCC), which presents high pozzolanic activity, in the microstructure, the resistance and the hydration heat in the new blended mortars.

The results show that, the addition of FCC to manufacture new blended matrixes causes a refineness of the pore structure as compared to reference sample and increase the compressive strengths. Furthermore this addition modify the hydration heat but this variation does not correspond with the percentage of replaced cement.

From the results exposed in present work, it can be said that FCC residue can be recycled as a highly pozzolanic material for the manufacture of commercial Portland cements. Therefore, this option could have a positive environmental effect, instead of dump an industrial waste reuse it as an useful complementary cementing material for construction.