

# Dryout Of Refractory Materials

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## Abstract

TRB company is developing a wide range of high-performance refractory products adapted to the needs of big industries such as blast furnace, steel works, foundry, cement, heat treatment furnace, etc... These products are formulated with silico-aluminous materials and other special compounds (SiC, graphite, zircon, etc.). Implementation process of these specific materials follows different steps: casting, curing, drying and heating.

This poster focuses on the drying step, which is a very sensitive and complex process, especially when free water and bonded water are released from the material. A model has been developed with the help of Comsol Multiphysics to understand the kinetics of this phenomenon, including moisture transport, heat transfer and poroelasticity.

The aim of this study is to optimize dryout schedules to decrease energy consumption while keeping the process safe from explosion risks.

## Reference

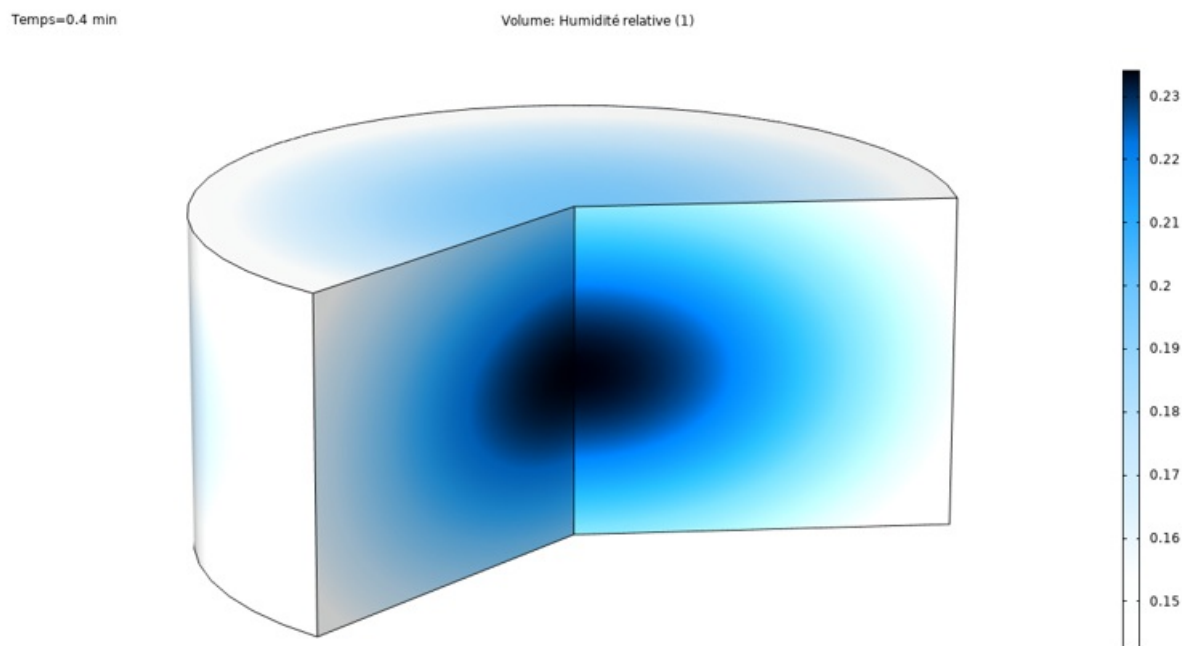
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## Figures used in the abstract



**Figure 1**