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Simulation du transfert de chaleur dans un mur multicouche application à un four cubilot

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Abstract : This work as main objective to make the simulation of heat transfer in a multilayer wall (three layers) applied to a cupola furnace. Numerical simulations are performed using the computer code ANSYS, using the finite element method. The influence of several parameters on the heat transfer as the choice of material and the thickness of the first inner layer was studied. The analysis of the results allowed us to see the influence of various parameters on the temperature inside the oven and see the best configuration for good thermal insulation so energy savings.

Keywords : Heat transfer, cupola, heat insulation