CERIS : Civil Engineering Research and Innovation for Sustainability

Fireproof protection of dwellings against wildFire

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Period
2023-2027

Funding
FCT scholarship (SFRH/BD/129681/2017)

FCT scholarship (2023.04011.BD)

Summary

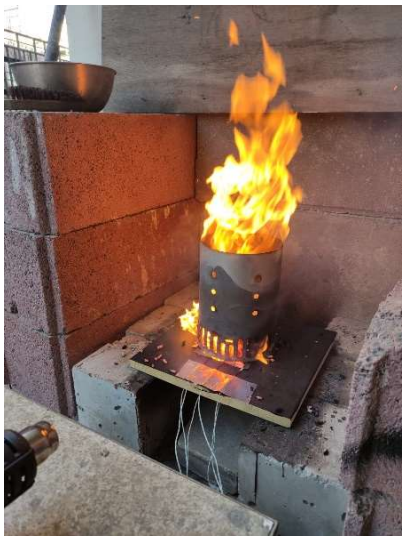
The fire risk due to climate change has impacted forest areas, causing damage to buildings but significantly impacting the communities. This proposal's main objective is to protect the houses against wildfires, applying the concept of façade and covering to the fire, using renewable and sustainable materials as cork-like more relevant.

The central objectives are the elaboration of a manual to promote legislation (Public policies) and be able to be implemented in the zones of high risk in wildfires to adopt these solutions to protect buildings from an external fire. Perform an experimental fire campaign with specimens and reduced-scale models of building materials, using fire curves of the code.

In order to verify the level of incombustibility of the initial solutions, perform a parametric numerical campaign and extrapolate the results for other structures and geometries to maintain the level of incombustibility of the previous campaign.

Keywords

Wildfire, cork, thermal resistance, sustaniability, new materials, construction.



Fire heat flux tests setup.

Fire resistance tests setup.