

# Using of waste pomace from winery industry to improve thermal insulation of fired clay bricks. Eco-friendly way of building construction

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This paper studies fired clay bricks made by using waste pomace from wine industry as an additive in brick production. The aims are both, studying bricks properties and showing a new way of pomace recycling. Several test specimens were made by using different percentage of additive. These samples were subjected to the corresponding assays in order to determine the maximum additive percentage to be added according to standards. It has been confirmed that the amount of pomace that might be added is limited to 5%, whereby brick's water absorption and compressive strength comply with standards. Therefore masonry structural requirements are preserved at the same time that collaterally a better insulation of the buildings enclosure is achieved by reducing its thermal conductivity up to 25%. © 2014 Elsevier Ltd. All rights reserved.

Compressive stress

Eco-bricks

Lightweight clay

Pomace wastes

Thermal conductivity

Water absorption

Compressive strength

Compressive stress

Thermal conductivity

Thermal insulation

Water absorption

Wine

Brick production

Building construction

Eco-friendly

Fired clay bricks

Structural requirements

Test specimens

Wine industry

Brick