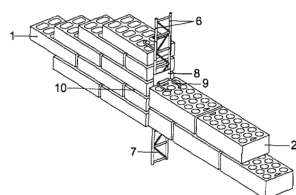


# FABRES. A way to avoid cracks in buildings

News device to improve the encounter between masonries composed of materials of different dimensions or nature.



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## Technological Offers type

[Technological solutions](#)

## Research and innovation areas

- [Industry, Materials and Circular Economy](#)

## ODS



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## Where?

[Maritime and Ports Engineering Research Group](#)

Keywords: | [fissure](#)

## Brief description of the technology solution and the added value it provides

Researchers from the Technical University of Madrid (UPM) have developed a device to improve the encounter between masonries composed of materials of different dimensions or nature. It resolves the constructive encounter between masonry elements, when using pieces of different measures. This invention is framed in the technical sector of the instrumentation in the field of Architecture and Civil Engineering.

## Description of the technological base

This device allows to fix different masonry walls and composed materials of different dimensions or nature, through the introduction of metallic elements, made of galvanized steel. It consists of two types of components, one vertical, located in the joint between the different masonries, and other horizontal, introduced in the interior of the courses.

The vertical component can be continuous or formed by discontinuous elements, aligned along the joint.

The number of elements, along the vertical component, will be in function of the rigidity that you want to give to the union and applicable technical regulations and it depends on the materials used.

***“This solution resolves a constructive problem which consists in the appearance of cracks between two masonry elements”***

## Market demands

### Construction

- CTE-DB-SE-F (compulsory regulation) contemplates the possibility of building walls composed of two sheets of different bricks fixed with steel bars, but giving the solution for the case of two sheets composed of exactly the same bricks.
- Among the types of walls that are defined are the cappuccino wall, composed of two sheets of bricks locked with some material, as they may be corrugated steel, and bent, with identical solution wall bars, but locking both sashes with brick arranged perpendicularly to the plane of the wall.
- In both cases the proposed solution involves using two panels formed by elements of the same dimensions, running out to solve the case of two sheets composed of pieces of different sizes, and even of a different kind.
- Real problem to the project usually walls of varying heights of course, which are resolved in project or work providing solutions that are not always correct and can never be optimal.

## Competitive advantages

- Valid solution for both new construction and renovation.
- Effective for walls and slabs of every kind and nature.
- Prefabricated element, easy to carry and handle.
- It solves the existing constructive problem to lock walls composed of different base materials.
- Enable to facilitate or improve the blinding between perpendicular walls, whether of the same or different materials.

***“The facades often combine walls of brick face with other continuous redressed (single-layer). Our contribution allows to solve the conflicting blindings”***

## Development stage

- Concept
- Research
- Lab prototype
- **Industrial prototype**

- Production

## **Contact**

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