

## SYSTEM FOR FIXING ARMOURS DURING CONCRETING



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### ABSTRACT

The research group “Materials and Construction Systems for Buildings”, from the Building and Urbanism Department of the University of Alicante, has developed a new and simple system that allows to fix any type of armours in concrete construction elements during the concreting process. This system avoids the movement of the armours in an efficient, technical and reusable way, and, therefore, also avoids future expensive treatments in case of unwanted movements. This new system is characterized by its low cost, light weight, ease of use and versatility for any constructive element.

The research group is looking for companies interested in commercial exploitation.

### ADVANTAGES AND INNOVATIVE ASPECTS

#### MAIN ADVANTAGES OF THE TECHNOLOGY

The advantages of this element over currently existing devices on the market are:

- 1) Avoids the movement of the armours.
- 2) Ensures the coating of the bars.
- 3) Eliminates possible deviations.
- 4) Avoids costly solutions a posteriori to correct wrong movements.
- 5) Fixing is done quickly and safely.
- 6) The necessary labour is reduced.
- 7) Ease of use.
- 8) The size and weight of the system are small.
- 9) The system is managed by a single worker.
- 10) Space and security problems are avoided.
- 11) The acquisition cost of the system is low.
- 12) The pieces have a simple geometry.
- 13) Ease to manufacture the pieces.
- 14) It is possible to reuse it, which reduces the total cost of the product.
- 15) It is very versatile, since it can be manufactured with different dimensions and formats.
- 16) It can be used in any type of work and for armours in different sizes.
- 17) It is extensible: it adjusts to any dimension of the constructive element (even in those of considerable lengths).
- 18) Ease of production: due to its reduced dimensions and simple geometry, it can be manufactured by companies from different sectors: metal, wood, plastic, etc.

- 19) Simple transport: being foldable and easily stackable.
- 20) Can be removed without causing damage or damage to the armours.
- 21) High speed and ease of implementation.
- 22) No complementary machinery is necessary for its placement.

## INNOVATIVE ASPECTS

Nowadays, there are no patented systems on the market to solve the armours fixation in reinforced concrete construction elements in an efficiently, accurately and reusable way, since it is usually done manually.

The present invention prevents the movement of the armours during the concreting process, avoiding to make expensive corrections afterwards.

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## MARKET APPLICATIONS

- Construction and Building Products.
  - The invention relates to a system used in the construction sector to fix the armours during concreting.
  - This novel system can be manufactured by companies from different sectors: plastic, metal, wood, etc.
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## COLLABORATION SOUGHT

Companies interested in acquiring this technology for commercial exploitation by:

- Utility model license agreement.
  - Development of new applications.
  - Agreements regarding technology and knowledge transfer.
  - Technical reports and scientific advice for companies.
  - Specific training, tailored to the needs of the company.
  - Technological support in those techniques that require high training or sophisticated instruments that are not available to the applicant company.
  - Exchange of personnel for defined periods of time (learning techniques, etc.).
  - Rental of internal equipment for customers wishing to carry out their own tests (infrastructure of the Department of Building and Urban Planning, or Technical Research Services (SSTI) of the University of Alicante).
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