

POSTEJO 4.0 – Innovation for Diversification and Export

Summary

The POSTEJO 4.0 is a strong commitment to innovation, with a view to diversifying products and exporting them through the formulation and characterization, in a research aspect, of innovative and eco-efficient concretes with improved durability. The three main goals of the project were:

- Significant quality increase of POSTEJO traditional product, precast reinforced concrete poles for the electric distribution network.
- Diversification of POSTEJO products, by identifying market niches and by creating high performance products, specifically designed for that end, e.g., ultra-high durability poles for electric distribution lines near the coast, with high exportation potential for South Europe and North Africa.
- Creation of new products for new markets, e.g. highly thin pieces (with reduced weight) signed by renowned architects and designers, with high added-value, making

feasible exportation to Europe, USA, Canada, Arab Emirates, among others.

The expected results of this project were the development of:

- New moulds to improve both production and finishing of POSTEJO products.
- New cementitious materials to improve mechanical strength, aesthetics, durability, and eco-efficiency of POSTEJO products.
- Alternative solutions to steel reinforcing bars (rebars) to materialize the reinforcement of POSTEJO products, considering service requirements, e.g., GFRP rebars for highly aggressive environments.
- New design (calculation and detailing) tools, including more accurate and precise estimation of the products' actions, need to withstand each relevant phase – production, storing, transportation, handling, positioning and service.



Figure 1. Production and test of new concrete poles (above); moulds and urban furniture elements (below).

Project Reference

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Leading Institution

IPC – Instituto Politécnico de Coimbra (Portugal)

Partners

IST-ID – Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento (Portugal)

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614 045.31€

CERIS

54 299.71€

Project Website

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