



LIFE HYPOBRICK is funded by the LIFE Programme
of the UE
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NEWSLETTER N° 1

LIFE HYPOBRICK

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LIFE HYPOBRICK is a project focused on the mitigation of the negative effects of climate change through the promotion and support of brick manufacturing industries to implement the Circular Economy.

THE BEGINNINGS OF THE LIFE HYPOBRICK PROJECT

LIFE HYPOBRICK was conceived with the will to be an allied for the brick manufacturing industries in their transition towards the implementation of the circular economy and simultaneously reinforcing decisive actions to fight the negative impacts of climate change.

That's why we set out to create a system to develop a different process for the manufacturing of sustainable bricks, since we are all sensitive to these impacts, just as other elements are: our own homes, the building elements, those on which the homes that give us shelter are built, as well as public buildings, cities and the spaces that all the inhabitants of the planet use.

LIFE HYPOBRICK, COMMITTED TO THE CIRCULAR ECONOMY AND SUSTAINABLE BUILDING

INTERVIEW WITH PHD FRANCISCO JAVIER GARCÍA TEN, MAIN RESEARCHER OF THE PROJECT AT THE ITC AND HEAD OF THE CERAMIC MATERIALS AND TECHNOLOGIES AREA

1.- What is the LIFE HYPOBRICK project?

LIFE HYPOBRICK is a demonstrative project supported by the European Union's LIFE programme, (Ref: LIFE18/CCM/ES/001114) which also has the sponsorship of IVACE, the Valencian Institute of Business Competitiveness of the Autonomous Valencian Government. Our aim is to decarbonise the manufacturing processes of the brick manufacturing industry, trying to implement the principles of the circular economy and the mitigation of the negative effects of climate change in these construction industries.

The aim is to switch the traditional manufacture of bricks which will be produced using a new process known as alkaline activation, instead of being manufactured by the traditional firing process at around 1000°C.

This process reduces 90% of the energy consumed, since the new bricks, instead of being fired, are "cured" at around 100°C, reducing the CO2 emissions into the atmosphere by 90%. In doing so, we contribute enormously to reducing the presence of greenhouse gases, which are largely responsible for the changes in the climate that affect our environment.

2.- And how do you do that?

We are working on the development of a manufacturing process for building bricks with very low CO2 emissions by reusing waste and scrap as raw material.

"This process reduces 90% of the energy consumed"

3.- What is the current status of the LIFE HYPOBRICK project?

LIFE HYPOBRICK will end in September 2022, and at this time we are specifying and defining the process at laboratory scale, but previously we have to select and characterize the waste with which we will obtain the new construction materials.

This type of waste is both industrial (fly ash) and urban (solar panel glass and televisions), and we have to ensure that its use does not change the characteristics of the new bricks, which would make the subsequent process unfeasible on an industrial scale.

"Together we are working to establish a new manufacturing process that uses the curing technique instead of firing"

4.- What results do you expect to achieve when the project will be finished?

We are a consortium led by the ITC which also includes the company Ladrillos Mora, the consultancy RCS, the German company Schlagman and the University of Nuremberg. Together we are working to establish a new manufacturing process that uses the curing technique instead of firing, and at the same time, we want to be able to implement and replicate it as far as possible in the brick industry, in order to comply with the objectives set by the European Union in terms of sustainable development, implementation of the circular economy in brick manufacturing industries, as well as minimizing CO2 emissions into the atmosphere from these gases and also from other harmful compounds (acid compounds, VOCs, etc.).

In addition, we want to replicate this technology in other materials such as tiles, roof tiles, pipes, slabs, and other non-ceramic materials such as concrete and its derivatives, which would represent a reduction of more than 80% of greenhouse gases emissions

WE HAVE BEEN IN...

MEETING IN BRUSSELS

On 3rd and 4th October 2019, ITC participated in a meeting held in Brussels between several coordinating entities of different projects approved by the European Commission in the framework of the LIFE Programme, fundamentally created to preserve the environment and to carry out actions of adaptation and mitigation of the negative effects of the climate emergency.

The most important aim of this meeting was to know about other projects approved in the LIFE Program, such as LIFE HYPOBRICK, whose main objective is to help decarbonize the economy by developing construction materials that do not need to be fired, thus eliminating that stage that consumes a significant amount of energy, in addition to eliminating CO2 emissions. Specifically, the Executive Agency for Small and Medium-sized Enterprises of the European Union (EASME), explained the rules of funding, communication and objectives of implementation and replicability of these research projects under the LIFE program.



WE HAVE BEEN IN...



International Press Conference of ASCER. LIFE HYPOBRICK Project. 04/02/2020.

CEVISAMA 2020

The Instituto de Tecnología Cerámica (ITC) disseminated the characteristics and objectives of the LIFE HYPOBRICK project at the international sectorial event Cevisama 2020 (03-07/02/2020 Feria Valencia-Spain).

More than 95,000 professional visitors attended this event, 21,000 of whom came from more than 180 countries around the world.

It was also presented during the international press conference organized by ASCER, the Spanish Association of Ceramic Tile Manufacturers, which was attended by more than 300 national journalists, 100 of them international, from 80 countries.

WE HAVE BEEN IN...



Presentation of the LIFE HYPOBRICK project at the CERÁMICA INNOVA 2020 Ceramic Technology Forum on 06/02/2020.

CERÁMICA INNOVA 2020

ITC participated in the International Technology Forum Cerámica Innova, where an oral presentation on the LIFE HYPOBRICK project was exposed the 6th of February 2020 at the Feria Valencia exhibition centre. Valencia (Spain).

WE HAVE BEEN IN...



Stand del ITC en QUALICER 2020



Detail of the scientific poster about the LIFE HYPOBRICK Project. Qualicer Congress 2020.

QUALICER 2020

The LIFE HYPOBRICK was shown in the World Congress on the Quality of Tile -QUALICER 2020, held on 10 and 11 February at the Chamber of Commerce of Castellón.

There, a scientific poster was presented and a leaflets were distributed in ITC stand, where the scientific community attending the congress (more than 600 participants) could learn about the characteristics of the project, as well as asking directly about it.



Visit Cards of LIFE HYPOBRICK- ITC at QUALICER 2020

WHO MAKES LIFE HYPOBRICK?

COORDINATOR:



Instituto de Tecnología Cerámica (ITC)- España
<http://www.itc.uji.es>

PARTICIPANTS:



RCS (Recycling, Consulting & Services,
S.L. España
<http://www.recyclingservices.eu/>



LADRILLOS MORA, S.L. España
<https://ceramicasmora.com/>



SCHLAGMANN POROTON GmbH & Co.
KG. Alemania
<https://www.schlagmann.de/de/>



THN (TECHNISCHE HOCHSCHULE
NUERNBERG GEORG SIMON OHM)
Alemania
<https://www.th-nuernberg.de/>

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VALENCIAN GOVERNMENT THROUGH
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Find us in:
www.lifehypobrick.eu

