"DEVELOPMENT OF MODULAR CONSTRUCTION FOR SUSTAINABLE DESIGN, STABILITY AND SEISMIC APPLICATIONS"

Fact Sheet

Project Information

MODCONS

Grant agreement ID: 315274

Status
Closed project

Start date
1 January 2013

End date
31 October 2015

Funded under
FP7-SME

Overall budget
€ 1 298 917,85

EU contribution
€ 856 000

Coordinated by
THE STEEL CONSTRUCTION INSTITUTE LBG*
United Kingdom

Objective

"Modular construction is used in housing and residential buildings because it is fast to construct and of high quality. This proposal provides the research necessary to extend two types of modular building systems into high-rise building applications where means of providing stability and in some areas, seismic resistance are very important. In addition, the proposal will lead to quantification of the sustainability benefits and acoustic performance, that affect the use of modular construction in the residential building sector.

With this information, it is possible to develop design guidance to support the use of these modular systems and to create new markets in high-rise and mixed use buildings. The research will involve full-scale physical tests on modules and on
groups of modules, and supported by finite element analyses as well as on-site measurements of performance. The tests will cover the basic structural performance of the modules and their connections and in particular, their robustness to removal of supports. This will also simulate the loss of support and tying action in seismic events. The structural guidance will be presented in the form of application rules to Eurocode 3.

Case studies and architectural information will be presented to support the use of the modular systems in practice. This will extend to building typologies using the developed modular systems. Seminars and other dissemination activities will be carried out to exploit the results of this research and to create market awareness.

Field of science
/social sciences/economics and business/business and management/commerce
/social sciences/other social sciences/social sciences interdisciplinary/sustainable development

Programme(s)

Topic(s)

Call for proposal
FP7-SME-2012

Funding Scheme
BSG-SME - Research for SMEs

Coordinator

THE STEEL CONSTRUCTION INSTITUTE LBG*

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Activity type
Research Organisations

EU contribution
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EU contribution
€ 1 000
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